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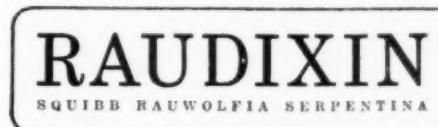
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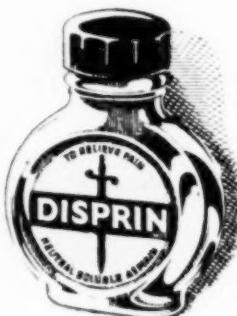
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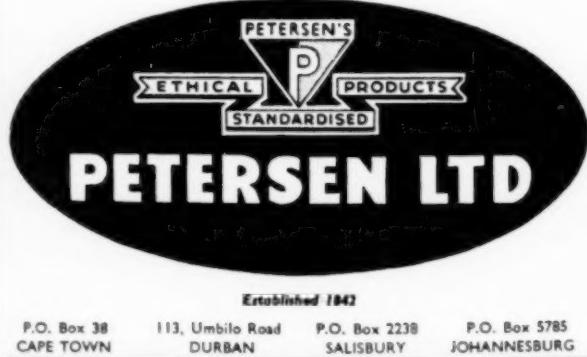
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*See *Lancet*, (1952), i, 742

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SURGERY AND THE ADRENAL*

A. LEE McGREGOR, CH.M., F.R.C.S.

Johannesburg General Hospital

Shock. It has become common practice to exhibit ACTH prior to and during operations of magnitude on poor-risk patients, usually without any knowledge of the status of the adrenal glands. The basis for this therapy is to bridge the important gap between the haemorrhage- or shock-producing episode on the one hand and the replacement of blood loss on the other by the extra-steroid activity supplied by ACTH. The stress factor is the loss of blood or circulating blood volume which produces a crisis in the internal environment of the organism. The adrenal cortex plays an important part in maintaining the internal 'milieu'. Thorn *et al.*¹ (1953) have shown that ACTH plays no part in contingencies of this kind in the presence of normal adrenal function.

Burns. These authors point out also that there is little basis for the exhibition of ACTH in burns, as it does not diminish capillary permeability or assist in the 'take' of skin grafts.

Cortisone. The use of cortisone has become so general that the surgeon is not infrequently called upon to operate on patients taking the hormone in large doses. Mulholland² (1952) has stressed that 'many environmental adjustments on which the surgeon depends for the repair of wounds, correction of imbalances, loss of blood, and tissue injury or bacterial invasion are conducted through the adrenal cortex'. The adrenal plays a significant rôle in enabling the organism to exist in an environment which changes. So important is this gland to the surgeon that Moore³ has said that every operation is an endocrinological experiment. Various writers have made the comment that surgeons have added little to increasing knowledge of the gland and its functions.

Healing of Wounds. Whereas under cortisone therapy epithelial activity is unimpaired and surface healing is satisfactory, the reactions of mesoblastic tissues to trauma are interfered with. Fibroblastic activity is slowed down and granulation tissue does not form, so that wound surfaces are smooth, yet skin grafts take well enough on this surface. Under the influence of cortisone or ACTH reserve amino-acids are diverted from protein synthesis to carbohydrate synthesis. Thus wounds which appear sound may readily give way to minor stresses.

* An address delivered by invitation of the Conference Committee of the Students Medical Council at the 5th Session of the Endocrinological Conference held at the Medical School, Johannesburg, on 28 May 1953.

Inflammation. This is inhibited by cortisone. Redness and swelling are reduced, pus formation is diminished and thus the lesion is *localized*.

Bacterial Activity. Cortisone produces a curious reaction to the presence of organisms. There is a feeling of well-being with little or no temperature, which is deceptive, for blood cultures may remain positive.

Pain. Under cortisone or exogenous ACTH a state of euphoria develops. The effect is comparable not to that of analgesic drugs but to that of lobotomy, with an uncomplaining acceptance of suffering. This is not devoid of risk, for surgical emergencies, e.g. perforations, may pass unnoticed. The least sign that all is not well is an imperative indication to stop the hormone.

Appetite. This is increased by the administration of these hormones and patients put on weight. Thus where caloric intake is poor or in cases of advanced malignancy the surgeon may well use them more often than he now does.

TUMOURS OF THE ADRENAL

These are cortical and medullary.

Cortical tumours are of 3 types (Spence and Thompson⁴—1947):

- (a) hyperplasia,
- (b) adenoma and
- (c) carcinoma.

They may result in:

(a) no recognizable hormonal changes; or
(b) changes in the steroid ratios with excess oestrogenic, androgenic or metabolic hormones.

The symptoms will depend on the age and sex of the individual at the time when symptoms appear and on the steroids involved.

Diagnosis is difficult and often enough is only made at operation or autopsy. In the great majority of cases of virilism and the adreno-genital syndrome the condition is due not to tumour but to hormonal imbalance. Diagnosis has been assisted by:

- (a) increasing knowledge of the physiology of the adrenal,
- (b) urinary assay of the steroids, and
- (c) peri-renal air insufflation. Surgeons have been nervous of the last-mentioned method of diagnosis of renal tumours as occasional deaths have resulted. Cahill⁵ (1941) reported the use of the method on several hundreds

of occasions without untoward occurrence, showing it to be a procedure of value which should be more often used.

Hyperplasia or steroid imbalance is much the commonest cause of clinical syndromes arising in the adrenal cortex. In Cushing's disease, whatever the etiology may ultimately prove to be, the symptomatology is mediated by the adrenal cortex.

Adrenal Shock. How serious this condition is to the surgeon may be judged from the fact that in a series of 22 cases of adrenal tumour operated on for Cushing's syndrome 18 died of adrenal insufficiency (Thompson and Eisenhardt⁶—1943).

In tumours of the adrenal cortex there exists functional or actual atrophy of the other gland in 30% of cases. One adrenal may rarely be congenitally absent. The condition of 'compensatory atrophy', as Syle called it, is due to an over-production of hormones by the tumour or hyperplasia, the opposite gland becoming inactive. The condition is most likely to occur in cases where the excess production of metabolic hormones takes place, as in Cushing's disease. It does not occur with tumours which do not produce hormones or in which excess sex hormones alone result. An exactly comparable condition of compensatory atrophy is seen in tumours of the parathyroids or in the insulin-producing cells of the pancreas in cases of tumour of the islets of Langerhans.

Although the surgeon, with replacement therapy at hand, is now much better able to cope with adrenal shock none the less exact preparedness and great vigilance during and after operation are imperative if disaster is to be avoided in adrenal surgery.

Hibernoma of Both Adrenals. A hibernoma is a tumour composed of a specialized type of fat tissue. Up to 1949 there were only 9 cases recorded which were fully authenticated. The specimen shown* was removed from a female aged 46 who was undergoing the first stage of the Smithwick denervation for hypertension. The adrenal area was occupied by a yellow-brown flat mass the size of the dorsum of the patient's hand with finger-like extensions into the surrounding tissue. It was thought to be a tumour of the adrenal and was removed. Investigation showed that the adrenal was incorporated in and fused with the mass. Histologically it was a hibernoma. At the second stage of the neurectomy an identical condition was found on the opposite side. This is the only case of hibernoma of the adrenal known and is also unique as being the only bilateral hibernoma recorded.

Tumours of the Adrenal Medulla. The adrenal is of ectodermal origin and tumours arising in it are of sympathetic-nerve-cell type. Sympathoblastoma and ganglioneuroma are rare and usually occur in children.

The remaining one is the pheochromocytoma or paraganglioma. It is a tumour of adults and is also rare. Graham⁷ (1951) collected 190 cases of pheochromocytoma associated with hypertension. Despite its rarity the tumour is of importance to every surgeon whatever his field of practice may be. A fatal hypertensive attack may occur in any operation in which an unsuspected pheochromocytoma exists. Should this emergency arise

it should be dealt with as advised by Bartels and Cattell⁸ (1950):

1. An adrenolytic drug should be at hand in the theatre.
2. The operation may be discontinued.
3. If the abdomen is open the tumour may be sought for and removed.

These authors make the following important observations:

1. Unlike cortical tumours, those of the medulla are not associated with compensatory atrophy of the contralateral gland.
2. Just as the blood pressure may reach alarming heights during operations on pheochromocytoma, so it may suffer a precipitous drop even while the tumour is *in process of removal*. This is ascribed to an increase in the peripheral resistance by excess pressor hormones so great that it is analogous to clamping the ascending aorta, with consequent acute left heart failure. The treatment is merely to drop the table or bed to the Trendelenburg position, thus conserving the cerebral blood supply, when recovery ensues in a few hours. Vaso-pressor substances such as noradrenaline are contra-indicated. So, too, only just sufficient fluid to replace blood loss should be given, thus avoiding the additional strain on the heart of excess fluid.

The corollary is that every operating theatre should be equipped for any and every operation with the means of combating not only cardiac arrest but the hypertension which may ensue when a pheochromocytoma exists.

THE RELATIONSHIP OF THE ADRENALS TO ESSENTIAL HYPERTENSION

It has long been suspected on purely clinical grounds that the adrenal is associated with hypertension. Merrill⁹ (1952) reviews the matter. He points out that just as Addison's disease results in hypotension consequent on adrenal hypofunction, so in Cushing's disease hypertension is frequently associated with adrenal hyperfunction. The excess exhibition of deoxycorticosterone to the sufferer from Addison's disease may bring the blood pressure to hypertensive levels. The patient with essential hypertension may become normotensive if adrenal insufficiency occurs. Merrill goes on to suggest that the benefit of the severe curtailment of sodium in hypertension brought about by the rice and other low sodium diets, is really due to adrenal exhaustion consequent on the severity of these diets and the long periods during which they have to be used to be effective. He points out the importance of the psychic factor in the development of essential hypertension. The stress, anxiety, and tension of modern life act as stimulants to the adrenal cortical hormones. The increased secretion is not utilized in the exigencies of fight or flight. The physical result is comparable to the exhibition of exogenous steroids, and thus a vicious circle is set going.

The adrenal medulla also produces hormones which cause hypertension.

The evidence tends to show that the adrenal is one of the factors in the chain which causes essential hypertension and it is not the activity of the gland as a whole but the ratio of one to the other of its steroids which may be the significant factor.

* The author exhibited the specimen during the delivery of this address.

Zintel *et al.*¹⁰ (1951) reported that in June 1949 they had begun the removal of one adrenal gland at the second-stage neurectomy in cases of severe essential hypertension. At a later stage 90% of the remaining gland was removed. The results were encouraging, blood pressures improved, symptoms receded, and persons previously incapacitated were able to return to work. In the discussion which followed the delivery of this paper Dr. R. H. Smithwick of Boston, Mass., stressed the fact that adrenalectomy was still in an experimental stage. Dr. P. Heinbecker of St. Louis, Mo., expressed the interesting point of view that adrenalectomy might produce greater benefit in essential hypertension by staying the development of arteriosclerosis than by the reduction of the blood pressure.

Thorn *et al.*¹¹ (1952) conducted a carefully planned study to elucidate certain questions relative to the effects of total adrenalectomy, particularly in its relationship to essential hypertension. They came to certain conclusions; one was that bilateral total adrenalectomy in one or two stages is feasible in advanced hypertension. The most pronounced physiological result of the procedure was an increase in the ability of the patient to excrete sodium and chloride. The patients became 'salt losers'. Although sodium and chloride loss always preceded a significant fall in the basal blood pressure, such a loss was not necessarily followed by a lowered pressure. They stress the fact that although congestive cardiac failure is not a contraindication to operation, nitrogen retention definitely is. Fair renal function is a positive pre-requisite to surgery. The susceptibility of the adrenalectomized patient with hypertensive vascular disease to the sudden withdrawal of maintenance hormonal therapy cannot be over-emphasized and fatal collapse may occur within 48 hours. They advise the operation in rapidly advancing malignant hypertensives with reasonably adequate renal function who do not respond to conservative treatment.

The writer has for some time been removing one adrenal in cases of severe hypertension falling into Smithwick's groups 4 and 5. So far 3 cases of total adrenalectomy have been completed:

Case 1 (Y. H.) This girl, aged 9, was referred from Rhodesia to Dr. A. J. Tinker. She was extremely ill, the history being of only a few months duration. The eyes were grade 4. The blood pressure was 280/170–190/170 mm. Hg. Urinary function was good, specific gravity 1.022, blood urea 28–45 mg.

After very careful studies by Dr. Tinker it was decided that the case was one of essential hypertension. Neurectomy and total adrenalectomy was performed in 2 stages on 27 August 1952 and 9 September 1952. After the second stage the child was watched day and night by relays of medical-student volunteers under direction of Drs. Tinker and Suzman. During her stay in hospital reduction of replacement therapy was followed by apathy and anorexia. She left the nursing home in good condition.

Dr. Tinker reports that she is very well on small doses of cortisone, has normal eyes, has put on weight, and is going to school. The blood pressure is 120/90 mm. Hg.

Case 2 (Mrs. S.) Aged 43. Referred by Drs. W. A. Rock and M. M. Suzman. Was studied in 1945. Her basal blood pressure was 235/128 mm. Hg. Renal function was good. The eyes were grade 2. Operation was refused.

She was again seen in 1952. Her condition had deteriorated greatly. The blood pressure was 260/180 mm. Hg. Eyes grade 3. There was constant proteinuria and the P.S.P. was poor. There was no nitrogen retention. Medical measures were

unavailing and operation was advised, a poor prognosis being given.

After intensive medical treatment surgery was exhibited, neurectomy being combined with near-total adrenalectomy. The first stage on 5 September, 1952 was well tolerated. At the second operation on 3 October, 1952 there was no untoward happening until midnight when the blood pressure fell catastrophically, all restorative efforts were unavailing and she died next day.

This case brought home the lesson that after adrenalectomy the patient must be under skilled supervision for 24 to 48 hours as any fall in blood pressure must receive immediate attention.

Case 3 (Mrs. C.) Aged 48. Was seen in 1951 by request of Drs. I. Freed and M. M. Suzman. Her average lying pressure was 210/113 mm. Hg. Her blood urea was 20 mg. %, the P.S.P. was bad and the ability to concentrate urine was 1.010. She was gravely incapacitated by the hypertension. It was thought that surgery could not benefit her. On a rigid medical regime the patient's condition improved and towards the end of 1952 bilateral neurectomy of the Smithwick type together with total adrenalectomy was performed. Her recovery was uneventful, thanks to the meticulous care of Drs. Suzman, Freed, and Leiman.

Her blood pressure at this time is 170/110 mm. Hg. She has put on 30 pounds, she takes 25 mg. of cortisone daily and requires no salt other than that in her food. She leads a normal life and is a happy woman transformed from an invalid.

In conclusion it is to be noted that whereas adrenalectomy produces one effect in essential hypertension, it does nothing to diminish the peripheral resistance or to alter the vascular reflexes. Both these result from extensive neurectomy of the Smithwick type. It follows that the two operations should be combined to produce maximal benefit to the sufferer.

CONCLUSIONS

1. The adrenal plays a significant part in maintaining the internal environment of the body.
2. The healing of wounds and the general metabolic processes of patients about to undergo surgery are profoundly affected if they have been taking cortisone regularly prior to operation.
3. The diagnosis of adrenal tumours may be so difficult that frequently it is only made at operation or autopsy.
4. Total adrenalectomy has a place in the treatment of essential hypertension.

5. The prospects of betterment are enhanced if the adrenalectomy is combined with bilateral neurectomy of the Smithwick type.

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South African Medical Journal

Suid-Afrikaanse Tydskrif vir Geneeskunde

EDITORIAL.

SENDING PATIENTS ABROAD FOR TREATMENT

Several times in recent years an appeal has been made in the press for gifts of money to enable a patient to go to Europe or America for medical treatment. Attention was called to the matter in a letter¹ in our correspondence columns last week.

No one questions the right of a patient who is paying his own way to go to whom he chooses for treatment, and to choose a doctor or institution at the other end of the world if he thinks he will get better treatment than he can get at home. The medical profession, which takes its stand on the principle of 'free choice of doctor', would be the last to object. A patient in South Africa may go to England or Scotland; a well-known Englishman's recent visit to America for treatment has been well reported; and people from other parts of Africa come to the Union to get treatment from South African specialists.

There is in South Africa a high standard of medical practice, and it is seldom that adequate treatment for a particular case is not available in this country. Of course there are in different countries, not excluding South Africa, individual surgeons or physicians with an international reputation for the treatment of some particular condition. If a patient has the money to spare and wants to employ one of these distinguished people abroad, well and good! But it has to be accepted that for the ordinary citizen of moderate means, and his dependents, the services of doctors abroad are not available.

The State provides hospitals where the best medical resources of this country are available without charge for those who cannot afford to pay. This service is regarded as indispensable; but no one would suggest that it should be extended to cover treatment in Europe or America, for instance. It is not necessary to labour this point. The question at issue concerns press campaigns to raise money to send individual cases abroad. Those we have heard of recently have not been convincing. The circumstances appeared to be the same as in many other cases in which the patient either goes to a South African hospital as a free case or gets treatment here as a paying patient. It is very fine for subscribers to pay for his treatment and a trip abroad into the bargain; he may or may not enjoy being 'news' and having bulletins about his progress published in the daily press; and a cure may be considered to justify it all. But is it in the public interest? Our correspondent¹ gives weighty reasons for thinking it is not.

1. Townsend, R. L. H. (1953): S. Afr. Med. J., 27, 892.

VAN DIE REDAKSIE

DIE STUUR VAN PASIËNTÉ NA DIE BUITELAND VIR BEHANDELING

Gedurende die laaste jare is daar al verskeie kere in die pers 'n beroep om geldlike steun gedoen met die doel om 'n pasiënt vir mediese behandeling oorsee te stuur. 'n Brief¹ wat laaste week in ons briewerubriek verskyn het, vestig die aandag hierop.

Dit spreek vanself dat 'n pasiënt wat sy eie koste dra die volste reg het om sy eie geneesheer te kies en 'n geneesheer of 'n inrigting in die uithoek van die wêreld te raadpleeg as hy meen dat hy beter behandeling daardeur sal ontvang as wat tuis beskikbaar is. Die mediese professie wat die beginsel van vrye keuse van geneesheer handhaaf sal die laaste wees om daarteen beswaar te maak. 'n Pasient uit Suid-Afrika besoek missien Engeland of Skotland; die pers het heelwat publisiteit verleen aan die onlangse besoek aan die Verenigde State van 'n welbekende Brit; en uit ander dele van die vasteland van Afrika kom weer pasiënte na die Unie vir behandeling deur Suid-Afrikaanse spesialiste.

Mediese praktyk in Suid-Afrika is van 'n hoë gehalte, en dit is selde dat daar nie in ons land doeltreffende behandeling vir 'n besondere geval beskikbaar is nie. Natuurlik is daar in verskillende lande, met inbegrip van Suid-Afrika, individuele chirurge of geneesherre wat wêreldbekendheid verwerf het met die behandeling van 'n besondere toestand. Indien die pasiënt die vermoë besit en een van hierdie vermaarde geneesherre oorsee wil raadpleeg is dit goed en wel! Dit moet egter aanvaar word dat die dienste van oorsese geneesherre nie vir die middelmatig bemiddelde burger, en sy afhanglikes, beskikbaar is nie.

Die Staat voorsien hospitale waar die beste mediese fasiliteite in ons land sonder enige betaling verkry kan word deur diegene wie se middele ontoereikend is. Hierdie diens word as onmisbaar beskou; geeneen sou egter beweer dat dit uitgebrei moet word om behandeling in Europa of Amerika, byvoorbeeld, te dek nie. Dit is onnodig om hieroor verder uit te wei. Die kwessie gaan oor beroeps wat in die koerant verskyn in verband met die insameling van geld om individuele gevalle oorsee te stuur. Beroeps wat onlangs verskyn het was onoortuigend. Dit het voorgekom asof die omstandighede dieselfde is soos baie ander gevalle waar die pasiënte of in ons eie hospitale kosteloos behandel word of as betalende pasiënte behandeling in ons eie land ontvang. Dit is 'n mooi gebaar van ondersteuners om vir die pasiënt se behandeling, en 'n reis oorsee op die koop toe, te betaal; hy mag, of mag nie, die publisiteit geniet; en sy genesing mag as 'n volkome regverdiging beskou word. Maar is dit in die publieke belang? Nie in die opinie van ons korrespondent¹ nie wat welbedagte redes vir sy mening gee.

1. Townsend, R. L. H. (1953): S. Afr. Tdskr. Geneesk., 27, 892.

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The public appeal to pay for a patient to be sent abroad implies that there is no practitioner in South Africa with the skill or experience that is needed. What must the effect be on the state of mind of all the other patients who remain here to be treated by the doctors who are thus declared 'not good enough'. It is a bad thing to shake people's confidence in their doctors, and it is a bad thing to create the suspicion that the profession and the medical schools of our own country are inferior.

No one will wish to deny to a sufferer the help he needs; but no doctor should without grave consideration take the responsibility of suggesting to a patient that he cannot be properly treated unless he goes abroad. Especially should he hesitate if the patient has not the necessary means. Our correspondent suggests that the doctor should obtain the views of senior colleagues in the specialty concerned. The press also ought to be most cautious about giving publicity to such cases; and our correspondent's suggestion that there should be consultation on the question should be given serious consideration.

Om 'n beroep op die publiek te doen vir fondse om 'n pasiënt oorsee te stuur insinuer dat daar geen geneesheer met die nodige bekwaamheid of ondervinding in Suid-Afrika is nie. Watter uitwerking het dit nie op die gemoedere van al die ander pasiënte nie wat in die land bly om hier behandel te word deur geneeshere wat aldus as 'nie so goed nie' bestempel word? Dit is verkeerd om die land se vertroue in sy eie geneeshere te ondermyn en dit is verkeerd om die indruk te skep dat die mediese opleiding en praktyk in ons eie land minderwaardig is.

Geeneen wil aan 'n lydende die hulp wat hy nodig het ontsê nie; maar geen geneesheer behoort, sonder ernstige oorweging, die verantwoordelikheid op homself te neem om aan 'n pasiënt te kenne te gee dat tensy hy oorsee gaan hy nie behoorlike behandeling kan ontvang nie. Des te meer behoort hy te aarsel as die pasiënt nie bemiddeld is nie. Ons korrespondent stel voor dat die geneesheer senior kollegas in die betrokke spesialiteit moet raadpleeg. Die pers behoort ook meer versigtig te wees met die publisiteit wat aan sulike gevalle verleen word; en ons korrespondent se voorstel dat daar raadpleging moet geskied verdien ernstige oorweging.

MEDICINE AND THE PRESENT CONCEPT OF REHABILITATION*

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Sir William Osler stressed time and again the value of the historical approach to problems in medicine. He has perpetuated the quotation from Plato:

'And I said of medicine, that this is an art which considers the constitution of the patient, and has principles of action and reasons in each case.'

More recently Sir Harry Cohen found it necessary to remind us that a profession contemptuous of its own history runs grave dangers.

Hippocrates and Galen wellnigh two thousand years ago were aware of and advised on the problem of the cripple.

The maimed, the sick and the aged have been the wards of medicine and charity for centuries. Until the latter part of the 19th century the life of the cripple was one of almost unrelieved darkness. In antiquity, his problem was solved by the simple method of destruction. Who lacked speed and strength did not survive. For a long period of time the darkness of the cripples' world was deepened even by the teaching of the Church. Physical deformity and mental inability came to be regarded as an act of God. The cripple was set apart from the community and a stigma rested upon him, since his disability was presumed to be associated with spiritual evil. This outlook is to-day put aside as a medieval superstition and its origin is forgotten, but this ancient, deeply-rooted suspicion of the cripple, although not so blatantly

expressed, is still sometimes present in the subconscious mind. It is this which makes the disabled express profound objection to the term 'cripple' and which induces the devoted parent to refuse treatment for his crippled child.

That more changes in the life of the community have taken place in the last hundred years than in any comparable period of the history of mankind is probably true. It certainly is true that the last 100 years have seen a most dramatic revolution in the position of the handicapped, and much light has been shed on the darkness of the cripples' world, that world which takes in the handicapped of body, mind and soul. Consoling is the thought that sometimes an essence of good is distilled from the interaction of great evils or cataclysmic events in the crucible of life. Such an essence of good was the realization and belated acceptance by Society that its very organization in no small measure produces the handicapped. This realization has done much to remove the stigma attached to the cripple and to encourage efforts to improve his lot.

The slowly dawning realization that 'what is left to the cripple can very often make up for what is lost' received great impetus when war came in 1914 and then again in 1939. The exciting victories in operative surgery, the conquest of the infections by chemotherapy and biological products, the increasing knowledge and control of many other pathological processes, exemplify the drama of medicine. They carry in their wake, however, greater future responsibilities in respect of the chronically diseased and in respect of disablement in an ageing population who

* A paper read at the South African Medical Congress, Johannesburg, September 1952.

have to live. The ever-increasing demand for manpower has, more than ever before, focussed attention on the baffling medical-social-economic enigma of our time. Is rehabilitation to be the principal key to the solution of this problem?

Cullen in the 18th century wrote, 'For when many new facts have been acquired, it becomes requisite that these should be incorporated into a system whereby not only particular subjects may be included, but the whole may be rendered more complete, consistent and useful.' In order that rehabilitation may be rendered 'more complete, consistent and useful' the philosophy of medicine should be so attuned to current demands that it could play a leading part in the development of the system which will use all the acquired facts of the past and the present. The importance of using every available communal resource in the work of rehabilitation is generally recognized. Too often these resources are tapped piecemeal, sporadically and inefficiently.

Failure to use these resources, or appreciate their value or encourage their development, may well result from thinking of rehabilitation as a problem affecting only a part of an individual or concerning only a particular specialist or a particular agency, rather than as one which involves man as a whole and the community as a whole.

From the four corners of the earth comes proof of the value of the rehabilitated to himself, to his fellow men and to the State. The darkness that enshrouded his life through ages has gone. He takes his place, and keeps it, honourably, shoulder-to-shoulder with his fellow man. He does not require charity and he need not be relegated to that backwash of industry—*light work*. All cripples cannot be gainfully employed but it has been a salutary lesson, of our times, to all concerned to realize how few fail to respond, given adequate facilities. The handicapped are with us in South Africa as in every other country. Whether in greater or in lesser degree we do not know for certain, for we have as yet not fully appreciated the teaching of that great physician of the 19th century—Pierre Louis—who demonstrated so clearly that 'through medical statistics lies the most secure path to the philosophy of medicine.'

What is the status of rehabilitation in South Africa to-day? Be not misled. South Africa is not devoid of effort to aid the handicapped, although integration may be lacking. Voluntary agencies and individual efforts have done and will continue to do great work in this field. Comparatively, the State—fortunately not yet the complete concept of the 'Welfare State'—plays an important rôle in the care and welfare of those whose scope for gainful employment is minimal. National efforts are directed largely to ameliorate the suffering of the handicapped and their dependants. Efforts to prevent handicap or to direct residual ability to gainful purpose are in their infancy or non-existent and the handicapped in the main is a tax-consumer and not a tax-payer. Industry and commerce are fast losing their antipathy to the employment of the cripple, and the very need for manpower is forcing the employer to believe, as Galen did 1750 years ago, that:

'Employment is Nature's best physician.'

Are we as a medical profession playing a part in this

exciting drama of life? The achievements in the science and art of medicine need no trumpeter, but are present-day efforts directed to man as a whole or is the emphasis still on that part which is diseased or injured? Is it sufficient for the cardiologist to diagnose, treat and prescribe the *Don'ts*? Should his approach not be more positive? and can he, alone, deal with the heart, the man, the family and their future? Does the orthopaedist confine himself to making the limb whole and mobile? or must he at all times remain aware of the effects of the disability on the economy of the patient and of the nation? Are doctors attempting to do too much for too many people, often with a training that cannot possibly cover all expected of them, and at the same time desiring, or having, to make money—a universal and very human incentive? To what extent is the undergraduate made to realize the value of the social worker and other non-medical co-workers? Does he know where to go for assistance or advice in the fields of vocational counselling, aptitude testing and job placement in order to guide his future patients? Social laws place on the medical practitioner a public function in high degree. He is expected to determine capacity for work. Can he do it on medical knowledge of incapacity alone, or must he know something of the requirements of the 'job'?

The practice of medicine has laid itself open to the criticism that careful study of the 'constitution of the patient' has been abandoned in favour of the quicker, easier treatment of symptoms. This practice of symptomatic treatment is the desertion of the science and the art and often the finer ethical standards of medicine. Specialization has played no mean part in the progress and the achievements of medicine. Man as a whole cannot, however, be decentralized, and it behoves the doctor to bear in mind that a brilliant diagnosis or a superlative operative success is not necessarily the 'be-all and end-all'. The patient has not only to live—the ideal must be gainful employment within his capacity—and in this the doctor can help. The doctor's problem in rehabilitation is manifold and although medical science has been making its contribution to the rehabilitation of the handicapped from the beginning of history, a re-orientation of attitude and approach is indicated in practically every type of medical practice. Professional medical guidance is necessary for the patient, and also for those who must advise the patient on his adjustments to his domestic and financial circumstances and his relationships with employers and society. The training of the non-medical rehabilitation worker to think of the medical possibilities inherent in each case is a very necessary one. Similarly the doctor himself will benefit by regular contact and liaison with these professional co-workers. The need for these co-workers is as yet hardly recognized in South Africa and it seems doubtful whether the medical profession have realized their value and their worth. The fields in which they work seem to be growing away from the doctor—a divorce fraught with tragic consequences. Medical guidance will always be the cornerstone on which will depend the decision to rehabilitate and the method to be adopted. Medical appraisal and treatment is but one facet of true rehabilitation but a very important one. The decision whether the patient can be restored to mental and physical

fitness is primarily and only the doctor's responsibility. As important is the dependence placed on the doctor to discover, through his science and his art, hidden or latent conditions or circumstances which would not only cause a complete waste of all rehabilitation efforts if overlooked, but may well result in consequences detrimental to the patient.

Education of the man in the street to accept a positive maintenance of health outlook rather than symptomatic treatment is very necessary. The doctor can help to develop this attitude.

The more recent developments in the fields of vocational training and education, skill and aptitude testing, individual job-counselling and selective placement, have brought new and invaluable resources into being. The newer developments of medicine ought to be integrated with these in a close union. Whilst there is no substitute for the doctor's judgment in matters of diagnosis and treatment, he must realize, accept and make use of the necessary ancillary services to complete the cycle of rehabilitation. This is the re-orientation we require and the attitude of mind to develop.

Rehabilitation is not a 'one-man job'. It takes into consideration the physical, psychological, social and vocational aspects. Gone are the days of the 'perfect anatomical specimen' concept of man when a man was either fit or unfit to work, depending on whether or not he was anatomically whole. The development of the physiological concept or residual-ability concept, taken together with the specialization and subdivision of jobs into their components, has created the need for the non-medical professional workers in the several fields. These workers and the doctors are complementary to each other and on their combined efforts depend successful rehabilita-

tion. Integration of the efforts of doctors and co-workers is sadly lacking. In too many fields of medicine there is the sporadic attempt to rehabilitate the injured part. Physical reconditioning—a very necessary and essential facet—is not only misinterpreted as rehabilitation, but may well lead to complacency and so stultify attainment of the ultimate object. The social worker whose help should be invaluable to the doctor still devotes too much time to dispensing charity. Personnel control and management, no longer in the experimental stage, is largely divorced from the medical department, and neither from the side of the doctor nor the personnel officer is there a concerted attempt to unite the parallel paths on which they progress. The handicapped patient also requires a re-alignment of outlook, because primarily on his co-operation depends the ultimate result. He is more likely to co-operate if he becomes a part of the 'team' and not only the object of the 'team'—he needs friendship, encouragement, guidance, treatment and placement.

A complete, consistent, useful system, embodying all these facets and able to treat, guide and place man in gainful employment has not yet been developed in our country. The responsibility for this does not depend entirely on the doctor, but the apparent complacency of the medical profession in this respect savours of a contempt of its own history and can but redound to its own discredit. Until the emphasis, in the philosophy of medicine and rehabilitation, is on *residual resourceful ability* and not incapacity, and until we, as a profession, create this emphasis, we dare not with Shakespeare say:

'And when the mind is quickened out of doubt
The organs, though defunct and dead before,
Break up their drowsy grave and newly move
With casted slough and fresh legerity.'

FUNDAMENTAL EDUCATION AND HEALTH*

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Health Education is a subject which is much to the fore nowadays. In most civilized countries, especially where there is any sort of socialized medical service, it is necessary to wean the people away from the concept that views health in terms of bottles of medicine and hospitals. In countries where there are more primitive peoples, where health services of any sort are poorly developed, it is necessary to educate the people so that firstly they will avail themselves of the medical facilities that are offered, and secondly they will tolerate and co-operate with the public health measures introduced for their benefit. And in fact we find that in most countries there is some sort of official health propaganda agency with this sort of objective, South Africa being no exception.

In this paper I propose to deal only with the problem of health education among backward or under-developed

peoples, but before doing so we might first consider what is implied by the term health education.

THE NEW CONCEPT OF HEALTH EDUCATION

Most of us, when we think of health education, think in terms of methods—posters and pamphlets, films and radio scripts, popular articles in the magazines and newspapers. But this is only half the battle. We are concerning ourselves with sowing the seed, without considering the preparation of the soil, and without bothering to see whether the seed takes root or what sort of crop results. We do not stop to consider whether in fact anybody's health has actually been improved or not. Some may perhaps go so far as to say that that is not our business, that our only responsibility is to point out the way, and that if people do not follow us it is their own fault.

Most of us would, however, agree that the whole object of health education is to improve people's health. We can therefore define health education as the use of

* A paper read at the South African Medical Congress, Johannesburg, September, 1952.

educational techniques to bring about a *change* for the better in the health and health practices of a people. Unless such a change does take place the educational process is not complete. The evaluation of the improvements must therefore necessarily be included as part of any programme of health education.

In this respect health education is no different from any other form of adult education, and this is recognized by the modern health educators, such as those working in the international teams sent out by UNESCO and WHO. As in other forms of education, it has now been recognized that there are 2 essential conditions for permanent results to be established.

Firstly, a lasting effect can only be achieved if there is strong *desire* for change, for improvement and progress, on the part of the people themselves. This takes us into social psychology, but here suffice it to say that permanent results are only likely to be obtained if the dominant 'group' decides for itself that change is necessary.

Secondly, if health education is to achieve any sort of success in a backward community it must itself be *part of a much larger change* in the community, particularly an improvement in its social, economic and educational state of affairs. This point may seem obvious, but how often it is overlooked! That is probably the chief reason why much of our health-propaganda efforts produce but trifling results.

Any attempt to improve the general standard of living of a people must itself be based on a programme to improve the educational level; and here we mean the education that is directly related to their real life-problems, not the dusty out-dated formal academic education that is all we usually offer to-day.

The educationalist therefore must be the key-man among the agencies directly or indirectly attempting to improve conditions in backward areas. He must turn administrator and prepare the ground. All others, whether they be economists, agricultural experts, sociologists, health workers, or what you will, should co-operate with him and with each other to make an integrated and cohesive team, all working with one objective—the improvement of the people's living standards.

FUNDAMENTAL EDUCATION

Such a total, all-embracing, approach has come to be known as *Fundamental Education*. It is a term that is being used in the international circles of UNESCO and WHO, and it is as well that we should understand what it means. Briefly it means what it says. Its object is to educate people in the fundamental requirements necessary for the minimum standards of what we are pleased to call our civilization. What are these fundamentals? They are—some of them—that people should be so educated:

1. That they live *full* lives—lives full of experience, opportunity and freedom.
2. That they live *happier* lives—lives free from prejudices and frustrations.
3. That they are ready to adjust themselves, mentally and physically, to the changes occurring in this rapidly-changing world.
4. That they are able to develop their *own* culture.

5. That they are able to advance themselves economically.

6. That they are able to advance themselves socially.

7. That the educational level of the people should be such that they can take their place side by side with other nations of the world.

8. Finally, fundamental education should enable all peoples to live together in peace.

It will thus be seen that fundamental education covers a wide field; in fact it covers the *whole* field of human experience.

What does a fundamental education programme actually set out to do to achieve all this? What are the actual items that the people must learn? They are:

1. The ordinary elementary school subjects, reading, writing and arithmetic, which are still a *sine qua non*. These are what we call the skills of communication and calculation. We might add that learning to think is equally important.

2. The vocational skills, e.g. crafts, mechanics, and especially agriculture.

3. Domestic skills, such as housewifery, child welfare, nutrition, etc.

4. Practical science, that is to say sufficient understanding of the laws of nature to overcome superstition and to allow action based on reason.

5. Knowledge of social organization, particularly the organization of local and central government.

6. Development of judgment, toleration and a sense of proportion.

7. Development of moral standards.

8. Development of spiritual values.

9. Lastly a practical knowledge of the basic facts of personal and communal hygiene.

THE METHODS OF FUNDAMENTAL EDUCATION

When a fundamental education team sets out to improve a community there are several fairly definite lines of approach to the problem. As has already been mentioned, there must be a *desire* in the people themselves for betterment and progress.

The first essential with this object is to make the community *realize the existence of its own deficiencies*, and make it realize that it is possible to *overcome these by its own efforts*. Sometimes, for example, people are quite unaware that they are malnourished and that this is sapping their vitality. In other cases they do not realize that it is their ignorance and illiteracy that hampers their progress. More usually they are content to lay the blame on the 'government', the 'white people', or the weather.

In making the people aware of their problems the best approach is to win over the natural leaders of the community, those people whom the rest of the community respects and follows.

In helping them to make their own plans to solve their problems, meetings must be arranged, preferably small meetings of influential people—and officials too where they exist. Public meetings are also sometimes a help. At these meetings the educator should avoid the mistake of lecturing to the people. His job is merely to ask a few pertinent questions, to drop a few hints, and to

let the people themselves *discuss* the problems. They may perhaps feel that they ought to appoint a small study group to go into the matters raised and report back, or they may feel like sending a delegation to a neighbouring territory to find out how the problems are dealt with there. They may decide to call in experts to help them. Notice that they *call in* the experts, the experts do not come along of their own accord with a ready-prepared scheme.

Cut-and-dried schemes, brought along by bureaucrats to be applied to the community can rarely achieve permanent success. The plans may be perfectly sound in themselves, but that is not important. These people will not consider the *merits* of a plan if it is something foisted on them by outsiders. No plan, however good, can be permanently successful unless it comes from the people themselves and receives their active support and participation.

Further the people must be given real control of the scheme, and be given real responsibility for its success or failure. If possible the money to pay for any schemes should be raised locally. In this way the people feel even more strongly that it is *their* scheme. It is, however, usually only possible to raise a small proportion of the required funds and in such cases a government fund may give a grant on a basis proportionate to the sum raised by the people themselves.

It is best to begin by attacking an obvious problem, one where the results will be obviously demonstrable and bring obvious benefits. In some areas the elimination of a local disease may serve, for example, malaria or sleeping sickness; in other areas introducing a new agricultural method which will give a definite increased crop yield, or a cash crop which will give immediate financial benefits.

The community should if possible be a small one, homogeneous, static and in a well-defined geographical area. In such a situation educational work will be far easier.

A preliminary *survey* of the area is highly desirable to find out the density of population, its social structure, its educational systems, its agricultural possibilities, etc. If possible the people themselves should do, or help in, this survey.

Finally the educators must not forget that it is necessary to check the effects of their work, to 'evaluate' it, as the Americans say. Is progress actually being made? Are the standards of living and the health and happiness of the people actually being improved? Without such constant evaluation, education in this modern sense of the word cannot be called a science and would remain merely an empirical philosophy.

Disease is often the root cause of the backwardness of a community, and, thanks to modern methods, is often the most simple point to attack. Disease is part of a vicious circle in that it saps vitality and initiative, leading to slothfulness, apathy and ignorance, and this leads to malnutrition, which in turn leads back to disease, and so it goes on. Malnutrition alone is enough to sap the vitality of a people. Eliminate disease from this circle and the other disabilities may fall away of their own accord.

Some diseases are fairly easily eliminated by the appli-

cation of modern methods. Others, such as tuberculosis, are more intimately bound up with the people's social and economic state, so that the 'fundamental' approach is all the more important.

IN SOUTH AFRICA

What is being done in this country along these lines? One can say at once that most of the people working among the Africans, however well intentioned, clearly have no idea of this approach. We might list some of the obvious faults with our present way of doing things. First, *lack of integration* between all the agencies concerned with Native welfare. In spite of the vital importance of agriculture on health, for example, we all too often find that agricultural officers and health officers hardly know of each other's existence. Then, too, we find the Provincial Authority dealing piecemeal with one aspect, and the Union Government with another. Particularly is this so in health matters, where there may be thousands of pounds spent in an area on hospitals, yet not a penny on public health. All too often we see the medical officer in charge of a health centre, the district surgeon, and the health inspector, hardly on speaking terms, let alone co-operating at all.

Second is the tragic *lack of consultation* with the very people whom the plans are going to affect most. The people are given virtually no encouragement to make their own plans, and little responsibility for carrying them out. Is it then any wonder that the plans are artificial, with no strong foundation, and only survive if well subsidized by Government funds? It is true that certain improvements in Native areas are only undertaken if the people ask for them, but the fault lies in that there is no preliminary educational, or 'conditioning', process to get the people to want these improvements. The plans for betterment are usually perfectly sound—on paper. But experience shows that the best of plans will need constant artificial props if they are not made with the free and willing co-operation of the people concerned.

Third, to *force* such plans, however good they may be in themselves, on an unwilling people by use of police powers is so completely contrary to the spirit of fundamental education that I need not elaborate on it; yet we see this tragic fault enacted amazingly often in this land of ours, this 'land of contrasts and contradictions', a land sadly in need of our efforts to improve its health and to improve its happiness.

SUMMARY

Health education, to serve any purpose, must bring about a *change* for the better in people's lives.

The evaluation of such a change must be part of the educational process.

Permanent and successful changes can only be brought about if the people themselves want such changes.

This is best effected by making health education part of a programme of *fundamental education* aimed at improving all aspects of the life of the community.

The method of fundamental education is the 'democratic approach'. People must be helped to solve their own problems by their own efforts and be given real responsibility for success or failure.

Fundamental educators should work in a team, of which the health educator is but one member. It is best to deal with small circumscribed communities at first, and to tackle well-defined problems. Disease is often a good point of attack.

Preliminary surveys are desirable, and periodic evaluation essential.

In this country the chief mistakes made are: lack of

integration and co-operation between the various bodies concerned with Native welfare; lack of consultation with the people; withholding of real responsibility for drawing up plans or for carrying them out; the use of force to get plans carried out.

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MANAGEMENT OF HEALTHY CHILDREN WHO 'WON'T SLEEP'*

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Sleep refusal is one of the commonest and most perplexing problems met with in infants and children. It causes much unhappiness to the parents, and ill health to the child. Its management may be easy or it may bristle with difficulties.

As Still¹ remarked out of our three-score years and ten some 17 to 20 years are spent in sleep.

Sleep is life's greatest rejuvenator. It 'knits up the ravelled sleeve of care.'

The sleep requirements of infants and children is shown in the following schedule by McCluskie²:

<i>Age</i>	<i>Hours of Sleep</i>
<i>Months</i>	
Under 1	24 except for feeding
1-2	21
2-3	20
3-4	19
4-6	12 plus 3 in morning and 3 in afternoon
6-8	12 plus 2½ in morning and 2½ in afternoon
8-9	12 plus 2 in morning and 2 in afternoon
9-10	12 plus 1½ in morning and 1½ in afternoon
10-11	12 plus 3
11-12	12 plus 2½
<i>Years</i>	
2	12 plus 1 hour in daytime
3	12
4	11½
5, 6, 7	11
8, 9, 10	10½
11, 12, 13	10

These figures are, of course, only averages, and may swing either way round about 30 minutes.

We learn from the above that the neonate sleeps all the time except when being fed. At this stage there is no sleep resistance. As the infant matures the amount of sleep gradually lessens, and when he is 4-6 months old there are 3 sleep intervals—a lengthy interval of 12 hours, and 2 naps of 3 hours each. The long sleep interval continues till the child is 4 years old, but the naps gradually diminish. When the baby is 10-11 months old it only has one nap until it is 3.

Nature's reason for so much sleep in the early weeks and months of life is clear when we consider Still's¹ shrewd observation that the heart beat is considerably diminished during sleep. Assuming it beats 10 less per minute, and if the child sleeps 13 hours, there is a daily conservation of $10 \times 60 \times 13$ or 7,800 contractions of the heart muscle. The respiration, likewise, diminishes in sleep. If it slows 3 respirations in the minute, there is an economy of 2,340 respiratory excursions a day. Such conservation of energy makes one appreciate the vital rôle played by sleep in human physiology.

Sleep is especially important in the early weeks and months of life when growth and development are at their peak. Consider an infant born weighing 7 lb. and measuring 19 inches. He doubles his birth-weight by the end of the 5th month and increases in length by 5 inches. By the end of the 1st year the birth weight is trebled—21 lb., and he has grown to 27 inches—a further 3 inches. Up to 5 years of age there is a yearly increase of 5 lb. in weight, and 3½ inches in height. Thereafter there is an annual gain of 5 lb. and 2 inches up to the age of 15, when growth becomes less rapid. None of these figures are 'norms' as there are so many variations and types.

Thus we realize the importance of sleep; its duration is directly proportional to growth and development. Hence for the child who is below expected height and weight early to bed and late to rise is a golden rule. Pallor and poor development is often due more to insufficient sleep than deficiency of food.

Sleep may be long or short, deep or light, refreshing or disturbing. Children vary in their sleep needs. Many require large amounts of sleep and many others make completely successful adjustment with limited hours of sleep.

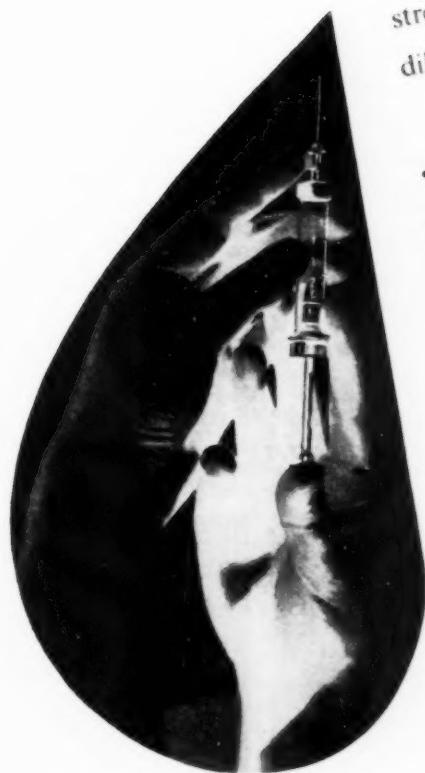
It is not unusual for children of 2 or 3 years to be troubled by bad dreams. That even infants may dream is shown by the startled sudden screams or by purposeful and restless movements during sleep.

Normal sleep is deepest during the 1st hour, decreases in intensity during the 2nd, is lightest in the 5th and 6th hours, and deepens again towards morning. The healthy sleep is deep and sound-proof. Healthy sleep-routine should be established early in life. In the first few years a daily nap in the fresh air should be encouraged. This ensures more restful repose at night. In the bad sleeper it is a mistake to think that by omitting this nap the night's

* A paper read at the South African Medical Congress, Johannesburg, September 1952.

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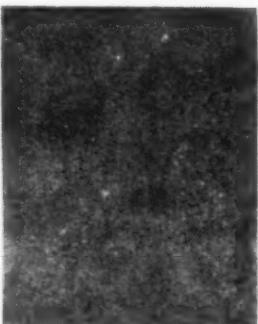
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rest will improve. Its loss may lead to an overwrought nervous system resulting in a night's sleep worse than before.

Late hours are bad for children and should be discouraged. Late rising in the morning never compensates for this transgression.

Wherever possible it is best for infants and children to have their own beds and their own rooms. It is not good for them to sleep in their parents' room. The sleeping apartment should be well ventilated and of equable temperature.

Sleep problems in the first 3 years of life are universally common and arise in normal children, without any mismanagement. It is part of the normal course of the evolution of their character. It is not just naughtiness. As mentioned by Illingworth,⁴ few to-day believe that the character and behaviour of a child are entirely determined by environment and management. Some children are inherently more negativistic. This negativism is a prime factor in sleep problems, and it requires parental patience, forbearance, and understanding. This negativism is a complicated pattern of sleep behaviour, and is of transitory character. It is an attention-getting mechanism.

The habit of sleep refusal is as common and almost as distressing as the habit of refusing food. They frequently go together.

According to Gee,⁵ a tendency to sleep badly runs in families and is sometimes observed in the youngest infants. Anxious desire for sleep hinders sleeping, according to the law that 'voluntary participation in an involuntary act inhibits accomplishment.'

Some children are born bad sleepers. They wake on the slightest disturbance. There is no depth to their sleep. They often lie awake for hours after being put to bed. The nervous child easily becomes a victim of auto-suggestion. He cannot fall asleep because he thinks he cannot. In no disorder is the rôle of habit more evident than in sleeplessness. Coué⁶ claims that in a conflict between will and imagination the imagination always wins. Thus, if the will shouts 'you must sleep', and the imagination chirps 'you can't sleep' then sleeplessness is the result. Immediately the will quits the arena the child is in dreamland.

Children often hypnotize themselves to sleep. Auto-hypnosis is a natural tendency of childhood. Complete relaxation is essential for sound refreshing sleep. Sometimes it helps to suggest to the child that his eyes look tired, that he appears sleepy, and that he will very soon be fast asleep.

The causes of child insomnia are legion: teething, fear of the dark, too much light in the room, dietetic errors, alimentary or genito-urinary disturbances, wet or soiled napkins, rubber diaper, abdominal binder, unsuitable woollen underwear, a soft, or hard but knotty, mattress, an oversized feather pillow, a poorly-made bed, insufficient bed clothes leading to cold hands and feet.

A loose sleeping bag keeps a baby from becoming uncovered in cold weather. A hard, smooth mattress covered with a blanket and flannel sheet, with a low, flat pillow is preferable. Flannel pyjamas are best. Avoid tight clothing. Many children fear the dark and sleep better when there is a small light in the room. A warm bath at night seems to soothe some children and promote sleep. The position of the infant during sleep is not

important. Some children are frequently found asleep across the bed or with their feet on the pillow. Many children have a sleep ritual. They will only retire in a certain attitude clutching a treasured, disreputable doll or other object of adoration. Talking in sleep is an indication of a restless mind, the result of mental excitement.

Cameron³ finds glucose a great help in sleeplessness. He recommends one or two tablespoonsful of glucose in the form of a drink, flavoured with fruit juice, when retiring. He maintains that some children withstand badly even the normal and physiological starvation of the night.

To ensure healthy sleep, diet plays an important rôle. 'Sound sleep cometh of moderate eating' and at a proper time. The diet should be studied to see that it is well-balanced, rich in vitamins, and correct in every detail. Feeds and drinks during the night should be discouraged. Very often disturbances of sleep can be traced to a large bottle-feed before bedtime. There is the insomnia of fullness as well as the insomnia of emptiness. Sleep improves when the last feed is more concentrated and less voluminous and given at least one hour before bedtime.

Sleep refusal should be tackled when first observed. The cause must be searched for and removed if possible. A jittery, jumpy mother or nurse makes for a troublesome and sleepless child. The mother or nanny will peep into the child's bedroom from time to time with some irritating remark like, 'Not asleep yet? Hurry up and go to sleep!' We often forget the torturing effect of fear and loneliness on some children, and its potency as a factor in sleep prevention. Sometimes want of sleep is due to insufficient exercise during the day. Now and again over-fatigue may be a factor. Reading in bed and listening to the radio should not be countenanced. Once the child has retired, all bids for attention must be ignored.

The pernicious custom of some parents of parading the sleep problems in the child's presence is ruinous. When the child feels that the family is distracted by his sleeplessness the habit becomes fixed. It impinges on his mind a sense of helplessness. The problem can only be solved by instilling faith and confidence in the child and thus building up his morale. The confidence in the child must be radiated by the whole family. The positive thought must be planted in the child's mind that every night there is an improvement. He will then endeavour to live up to his reputation and eventually graduate as a good sleeper. Peace and harmony, gentle handling, and a quiet environment, are the essentials of a good night's restful and refreshing sleep.

There is an art in handling and speaking to a difficult child. Nowhere is tact and diplomacy more important. The mother or nurse must pretend that his disturbing conduct is a matter of no importance. He should be put to bed with complete confidence. A quiet period before bedtime is a healthy routine. To insist on sleep where there is no desire is senseless, for sleep will not be commanded. One cannot stampede a child to sleep. To put him to bed as a punishment is bad enough but to smack him or use corporal punishment in any form is disastrous.

Every child loves the limelight and nothing puts him into prominence more than when he is the chief topic of conversation. It affords him sadistic satisfaction to be in the centre of the picture. If struggling and crying have occurred several nights in succession, the child comes to

associate his bed not with sleep but with tears and emotional distress. In bed refusal it is good policy to postpone the bedtime an hour or more. There is no wisdom in a rigid time-table. The human 'clock' does not necessarily synchronize with the clock on the wall. A headstrong child passing through the negativistic phase is apt to rebel if put to bed before he is sufficiently tired or sleepy. The delight in any sleep improvement must be expressed many times a day in the child's hearing. The placid child usually eats and sleeps well. Sleeplessness by night and fretfulness by day go hand-in-hand and form a vicious circle.

In chronic cases of bed and sleep refusal we usually find an over-indulgent, distracted, worn-out mother, and a rebellious unreasonable infant whose physical and emotional demands know no bounds. To terminate this tyranny once and for all the mother is instructed to proceed as follows: At bedtime the child is given a severe talking-to with strong emphasis that this bullying must cease forthwith. He is told to respect his bedtime as a good child should, and to sleep in his own cot because he must have his rest and sleep, and she must have hers; that this is the final warning and all further tomfoolery from him will be ignored and treated with contempt. He must read in her face and gather from the tone in her voice that she is determined to break down his resistance and have it her way. At the same time he should feel that her affections for him is in no way disturbed. As observed by Spock,⁷ it is indeed amazing that this serious talk works almost immediately in most cases—even from as early an age as 6 months. Once the child realizes the futility of resistance the battle is won. The mother becomes inspired with confidence and enthroned as a disciplinarian who will stand for no nonsense. With improved sleep comes general improvement in appetite, spirits, health and strength.

For prevention and treatment of these sleeping difficulties it is essential for parents to study the processes of normal child development. It is regrettable that most parents delay consultation with their practitioner until the sleepless habit becomes intolerable.

As regards drug therapy: this should be resorted to only as a last resort and should be used very sparingly. It must not be a substitute for finding and removing the cause.

It may be useful for a few nights to initiate the sleeping habit. On the whole hypnotics are most unreliable. Chloral is probably the safest and best for children. Two gr. of chloral hydrate is given to a baby of a year old; 4 gr. to a child of 4, and 6 gr. to a child of 6. It is soluble and should be sweetened and given at night. If necessary it may be repeated 4 hours later. To lean on hypnotics indefinitely is an admission of defeat and incompetence. Sometimes the parents need hypnotics more than the child, who, in spite of a restless night, wakes hale and hearty next morning.

CONCLUSION

Sleep, 'tired nature's sweet restorer', is essential for normal growth and development of children.

Sleep requirements vary considerably; it is largely a matter of habit. Proper sleep routine should be established early.

Sleep problems are common, run in families, and cause much misery and poor health. Many children are negativistic in the early years of life.

Sleep refusal is mainly due to over-solicitous parents or nurse. Among the commoner causes of insomnia are also: fear of the dark, physiological discomforts, unsuitable clothing and bedding, faulty environment, wrong feeding habits, wet or soiled napkins, disturbing noises.

For parents a knowledge of child psychology is a *sine qua non*. The whole family must radiate confidence in the child's sleeping habits.

Soporifics play an insignificant rôle in this perplexing condition.

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RECENT DEVELOPMENTS IN THE FIELD OF NUTRITION

W. A. ODENDAAL, D.Sc.
Union Department of Nutrition

Of nutrition it has been said. '*It is the corner stone of preventive medicine, the handmaiden of curative medicine and the responsibility of every physician*'.

Food, clothing and housing are the 3 basic requirements of man. The old proverb has it, '*Half the struggle of life is a struggle for food*'. But for the fortunate minority food does not demand so large a percentage of their income as for the masses who have to maintain health, efficiency and happiness on a meagre income.

Nutrition is a comparatively old branch of medicine. In the past decade, however, it has made such great progress that nutritional science bids fair to play a leading part in medicine, as well as in agriculture.

THE COMPLETE DIET

There was a time when attention was chiefly devoted to the proteins and their components, the amino acids. Later the discovery of vitamins led to the concept of nutrition deficiency diseases. During the last century the consumption of fresh and unsifted foodstuffs decreased on account of the migration of rural population to the cities, resulting in a rise in the price of such fresh products as vegetables, eggs and milk and an increased demand for sifted meal. These changes in food habits caused serious vitamin deficiencies.

What is present opinion as to the importance of the nutrients proteins, minerals and vitamins? A warning is

sounded that it is wrong to devote too much attention to one or a few nutrients, like a single mineral, amino acid or vitamin; or to consider the nutrition of only a single part of the body such as the skin or hair. Like nutrition, the body must be taken as a whole. Attention is no longer focussed on protein as a body-builder, the vitamins as anti-infection substances or carbohydrates and fat as energy foods. All these food constituents are essential for the construction of tissue, the protection of the body against disease and the supply of energy. The formation of new tissue requires not only proteins but also minerals and vitamins, and this demand is in direct proportion to the rate of growth or repair.

A diet complete in all respects, preferably in the natural state, is necessary not only for healthy persons but also for the sick. Thousands of pounds are spent daily in medicine on single nutrients, particularly on B-vitamins and the amino acid methionine. The view however is rapidly gaining ground that single nutrients are only needed when food cannot be taken orally or in the initial phase of oral feeding. As soon as a complete diet can be taken there is no advantage in the use of extra single nutrients such as vitamins and amino acids. Even the use of methionine and choline in liver diseases cannot be justified except in fatty infiltration, but even then its use is doubtful. It is also realized that the body requires more than what is present in synthetic B-vitamin preparations.

Recent development in nutrition research concerns the study of the interaction between the various food constituents, nutrients and aliments. The discovery of isotopes facilitated this development. Complicated reactions in the body are promoted by the intervention of catalysts and enzymes, minerals and hormones. The apo-enzymes and co-enzymes contain amino acids, minerals and vitamins, and unless these nutrients are present the enzymes and catalysts cannot be formed. These enzymes and catalysts operate on a chain system so that a weakness or a deficiency in a link can endanger life. Much time in nutrition research is devoted to the enzyme because it assists in explaining the mechanism of the action of food and food constituents, as well as the cause of disorders and the need for the various food constituents.

The mutual interaction between the essential and non-essential amino acids is receiving attention afresh and it is considered that even the essential amino acids are not independent but are quantitatively dependent on the non-essential amino acids. Even the non-protein nitrogen must be considered.

Single nutrient deficiencies seldom occur in nature. Vitamin C deficiency (scurvy) dominated nutrition conditions in the old days because seamen had to go without fresh fruit and vegetables for months and even years. Only in parts of the Northern Hemisphere where there is lack of sunshine, does widespread vitamin-D deficiency occur to-day, in conjunction with its associated mineral disturbance. For the rest a multiple nutrient deficiency can rather be expected, with or without a calorie deficiency. Even the much-discussed 'Kwashiorkor', which is a symptom of a syndrome, is caused by a multiple nutrient deficiency (amino acids, vitamins and minerals) and not by a lack of proteins only.

In the enrichment of such staple foods as bread and mealie meal, which are consumed on a large scale by the

masses, the tendency is no longer to enrich sifted meals with 4 chemical nutrients—thiamin, riboflavin, niacin and iron. The enrichment of brown bread with natural products such as milk powders and other animal products and soya beans is strongly advocated, even in America where it has become traditional to enrich white bread with the 4 chemical nutrients. Nutritionally it is most difficult and perhaps impossible as well as uneconomic to replace nutrients in bread after they have been removed. Rather enrich the more nutritious food! If the population is able to afford the necessary food in other ways it matters less.

Attention is directed to the possibility of an imbalance between the various nutrients. If the intake of one nutrient is too high or attention is given to it only, the harmonious interaction between the various nutrients may be disturbed and health may be impaired. Positive harmful results have been obtained in this way, not only with the vitamins but also with the amino acids, essential though they may be to life.

Previously the vitamins were principally regarded as being responsible for the protection of the body against disease; hence the expression 'anti-infection vitamin'. To-day we know that protein is in reality of primary importance in the protection of the body. The anti-bodies are regarded as a class of specialized protein, a specific globulin, in the construction of which amino acids are required and which can only be formed in co-operation with the vitamins and minerals. Apo-enzymes, co-enzymes and catalysts are involved in the formation of these antibodies and for this reason a direct connection has also been found between the immunity response and vitamins such as pyridoxine, pantothenic acid and folacin.

It has been demonstrated that 10 of the amino acids that are obtained by the hydrolysis of a protein are essential for the rapid growth of a young rat, but that for the maintenance of the growth of the adult rat only 9 amino acids are necessary. For the maintenance of a positive nitrogen balance over a short period in adolescent man only 8 amino acids are necessary, but if any one of them is absent for a longer period lack of appetite occurs. This happens so rapidly that it is realized that amino acids can hardly be stored in the body as fats and carbohydrates are. For this reason it is now suggested that breakfast should include animal protein such as milk, egg, cheese or meat, to bridge the long interval between dinner and lunch or even dinner and dinner. It is also realized that if amino acids are taken in unbalanced proportions, as they exist in most vegetable proteins, they cannot be stored in the body to be supplemented at a later stage. The essential amino acids should be taken together and not one after the other.

NUTRITION IN MEDICINE

Nutrition is accorded an important position not only in preventive medicine but also in therapy. The sick person rapidly becomes undernourished although no physical symptoms may yet be visible. The undernourished patient recovers with difficulty and does not readily react to treatment. This is of importance in surgery and anaesthesia and in gynaecology. For a normal endocrine balance correct nutrition is essential and cases of

dysmenorrhoea or abnormal bleeding are frequently improved by proper nutrition. If indications are confirmed that nutrients function pharmacologically in massive doses, new methods may be opened up in therapeutic medicine.

Psychiatry. Many psychiatric cases show signs and symptoms of nutritional deficiency and nutrition is therapeutically important in such cases. Promising results have also already been obtained with mentally defective children. Brown bread enriched with 6% soya flake and 6-8% milk powder is supplied to mental hospitals in the State of New York.

The Nutrition of the Aged. It has long since been proved that correct nutrition is essential for the growing child, but because old people do not increase in height, it has been assumed that they no longer grow and can therefore do with less and poorer-quality foods. The concept of growth, however, has changed, and it is appreciated to-day that growth, though not in height, takes place daily in adults and the aged. Body tissues and their protein constituents are not static but are continuously destroyed and replenished. Not all the catabolic products can be used for anabolic purposes; some are excreted and must be supplemented by new ones. In the adolescent and young adult the endocrine glands are attuned in such a manner that the hormones assist in anabolism. In the aged the gonads cease functioning, and the metabolic picture is dominated by a condition of catabolism. The demand for nutrients will therefore increase rather than decrease. As a result of decreased physical activity the calorie requirements will decrease. The aged are therefore still in need of high-quality foods such as meat, fish, eggs, cheese and milk.

Many illnesses associated with old age are called senile and not much is done about them. In old age the skin becomes dry, coarse and atrophic, the bones become brittle (osteoporosis), the brain deteriorates, etc. It is now known that many of these disorders are due to nutritional shortcomings and that with proper nutrition not only life but the years of health, happiness and productivity can be considerably increased. The 'burden' on the State can thus be eased. Correct nutrition is a life-long need starting before birth and continuing to old age.

Methods of Determining Food Values. The importance of determining food values by chemical analysis still holds good, but there are factors other than chemical composition which determine the nutritional value of food. Such factors as digestibility, assimilability, toxicity or supplementability can rather be determined through biological tests, which remain our last and most important resort for judging nutritional value, and provide a criterion to establish what price should be paid for particular foods. In human nutrition these tests are not only carried out on animals but also on man himself. The securing of experimental results is only 50% of the scientist's task; the remaining 50% consists of the interpretation of those results.

In planning a diet or diet scales the old method of using food tables is no longer used alone, but biological values are also taken into consideration. In passing, it may be mentioned that through our improved and more rapid analytical methods, the amino acid composition of most foods is known and that dieticians do not work in

terms of proteins only but also in terms of amino acids. Pyridoxine should also be recognized in the diet scale and consideration should be given to pantothenic acid and folic acid.

Chemicals in Food. Throughout the world alarming proportions of chemicals are daily finding their way into our food. Chemicals are used as so-called bleachers, improvers, fat-extenders, sugar substitutes, colouring substances and raising agents and for purposes of flavour. They are also used as anti-oxidants, antibiotics and insect or weed killers, etc. In the U.S.A. the Federal Food and Drug Administration found in a survey that as many as 842 different chemicals were used or proposed to be used in food. In many cases the chemicals do not appear to be harmful in the small doses in which they may be taken, but we cannot but feel concerned if we bear in mind the various kinds which are taken over years, that many, particularly those which are fat-soluble, are cumulative. Insect-killers may find their way into animals and on account of their fat solubility may reach man via milk or butter. The lives of labourers handling insect-killers are frequently endangered unless special precautions are taken. Lord Douglas recently said in the House of Lords, 'I am, therefore, suggesting that the Government should take energetic and immediate steps to set up such an organization and to pass legislation prohibiting, or at least severely restricting, the use of chemicals in the preparation of food and requiring a full and accurate disclosure of the substances contained in all articles sold as food which do not literally and completely conform to the description by which they are sold.'

The Cause of Disease. Many illnesses such as heart and blood-vessel disease (atheromatous), diabetes, obesity and others are in many instances attributed to food habits which may cause malnutrition. Environment may have its effect but research workers are attempting to establish to what extent nutrition is of direct aetiological importance. Fat and cholesterol have frequently been suspected, and concern has been expressed about our important foods—meat, milk and eggs—and their high cholesterol content. Fortunately we possess sufficient knowledge to realize that foods of animal origin are our most important foods and that the fat and cholesterol deposits in the body are principally dependent on the total calorie intake and not on the small absolute quantities which are present in foods.

Mass Feeding. Mass feeding is on the increase in order to provide cheaper and more effective nutrition to population-groups. Industries are particularly aware of the advantages of better nutrition in securing higher dividends, less accidents, lower absenteeism and increased production.

Nutrition Education. Throughout the world it is appreciated that malnutrition and even under-nutrition are not necessarily due to poor production but that ignorance makes an important contribution. It is not enough to accumulate knowledge of nutrition in libraries, laboratories or kitchens. Knowledge gained must be conveyed to the individual.

Thanks are due to the Secretary for Nutrition for permission to publish.

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Ann. Surg. 133: 644-649, 1951.

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THE LEFT MAIN BRONCHUS AND ITS VULNERABILITY IN PULMONARY TUBERCULOSIS

T. W. RANDALL, M.B., B.CH. (RAND)

Medical Superintendent, Nelspoort Sanatorium

It is well recognized that the left main bronchus, because of its angulation and length and because the left upper lobe bronchus is a hyparterial bronchus, is more vulnerable to damage in tuberculosis than is the right main bronchus.^{1, 2, 3} This damage leads frequently to stenosis with ultimate destruction of the left lung. It is not perhaps sufficiently realized how this danger is enhanced by fibrosis in the left upper lobe kinking the left main bronchus and leading to pooling of secretions and interference with drainage from the left base.

In this article 6 cases are presented, and contrasted to show this process, and suggestions as to therapy are made.

Plate 1.

This shows a normal bronchogram of the left lung, with the normal upward curve of the left upper lobe bronchus, and direct continuation of the left main into the left lower lobe bronchus.

Case 1.

A woman aged 30 years with a 6-year history of pulmonary tuberculosis variously treated. Bronchoscopy showed congestive inflammatory changes in the left main bronchus. The basal bronchi were considered normal. Plates 2 and 3 show the tuberculous process and the bronchogram. It is obvious that the left main bronchus has lost its almost straight lower contour and is convex downwards. The left lower lobe opening has been pulled up but no pooling is noted in the left main bronchus.

Case 2.

A woman aged 28 years with a 2-year history of pulmonary tuberculosis. Bronchoscopy showed ulceration of the left main bronchus. There was considerable difficulty in visualizing the left basal orifices.

Plates 4 and 5 show the tuberculous process and bronchogram. A further stage in the distortion is shown with pooling of lipiodol in the left main bronchus.

Case 3.

A woman of 32 with a 6-year history of pulmonary tuberculosis extensively treated. Bronchoscopy showed red and grossly oedematous mucosa in the left main bronchus. Owing to sharp kinking at the level of the left upper lobe orifice the base could not be reached. Despite the danger of possible atelectasis, from bronchial occlusion by thick secretion or increased oedema post-operatively, a thoracoplasty was performed.

Plates 6 and 7 show the pre-operative position and plate 8 the markedly beneficial effect of a thoracoplasty in correcting the bronchial distortion.

Case 4.

A boy of 16 years with a one-year history of pulmonary tuberculosis. Bronchoscopy showed an acutely inflamed,

narrowed, oedematous left main bronchus. The left upper lobe orifice and base could not be reached.

Plates 9 and 10 show that the left main bronchus is coming off almost at right angles to the trachea. A little pooling of lipiodol is present and the left basal bronchus is slightly pulled up. This case was also successfully treated by thoracoplasty but no post-operative bronchogram is available.

Case 5.

A man of 40 years with a 4-year history of pulmonary tuberculosis. Bronchoscopy showed a slightly narrowed and scarred left main bronchus. Just below the level of the inflamed left upper lobe orifice the bronchus narrowed suddenly and took a sharp turn forwards and downwards. The base could not be reached.

Plates 11, 12, 13 show a slightly different condition from the other cases. All the bronchi are extensively damaged. There is no pooling of lipiodol, but the lateral bronchogram shows the pulling up of the entrance to the lower lobe and the narrowing and sharp turn at this point.

Case 6.

A man of 35 with a 9-year history of pulmonary tuberculosis. For the last 5 years he had been followed as an out-patient and was sputum-negative until 2 positive results were obtained in the last 3 months of this period. He was clinically fit and at work. The plates 14, 15, 16, 17 show the gradual progress of fibrous contraction during the 5 years and the ultimate black-out of the left lung. Plate 18 is a bronchogram taken at the same time as plate 16, and bronchoscopy at that time showed a normal left main bronchus for the first inch. Below this ulceration and nodularity of the mucosa were present. The left upper lobe orifice was seen but at this level the main bronchus narrowed suddenly and a sharp kink prevented the base being reached. The bronchogram shows the pulling up of the lower lobe orifice and the angulation at this point. Also the distortion of the trachea and upper lobe bronchi.

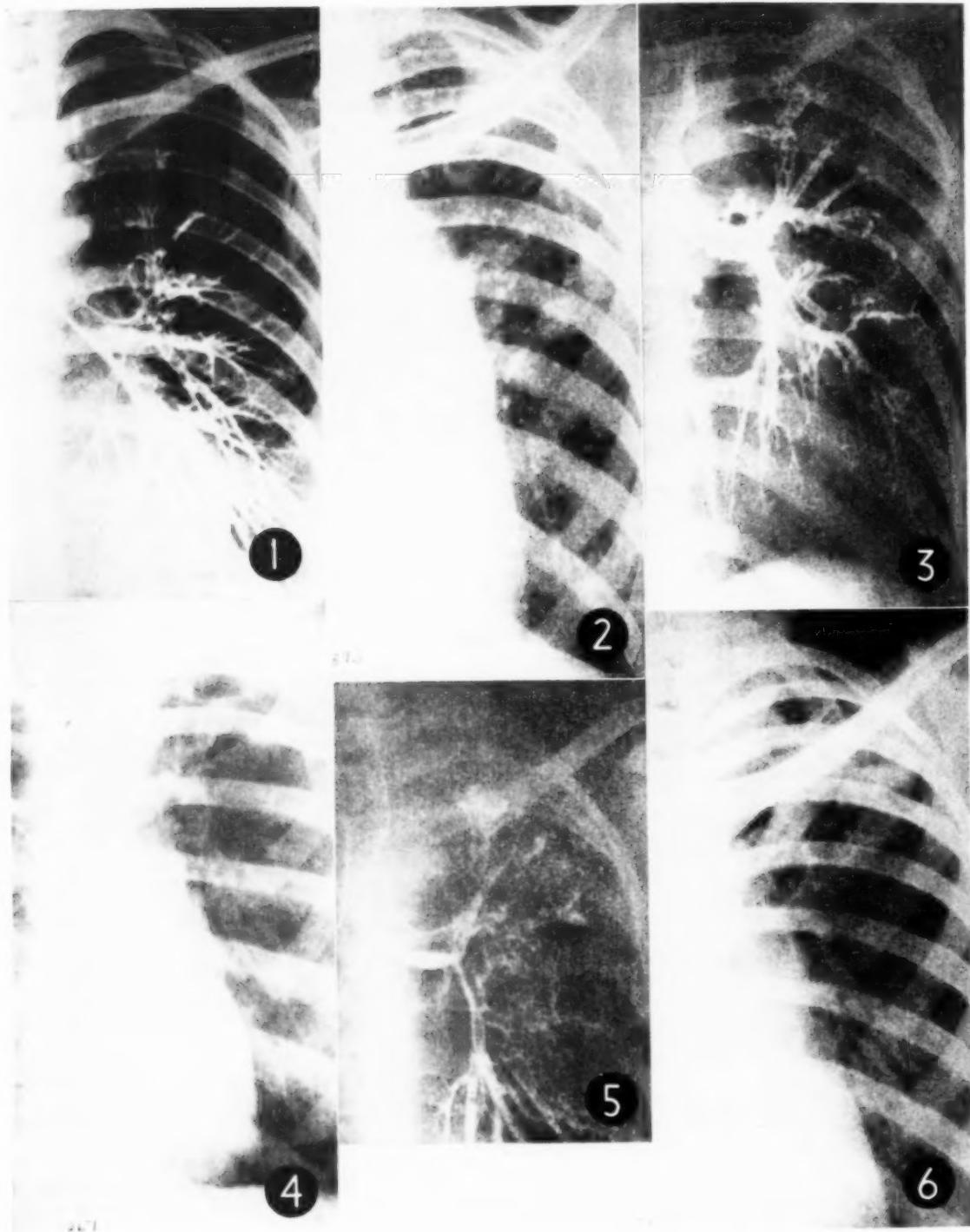
DISCUSSION

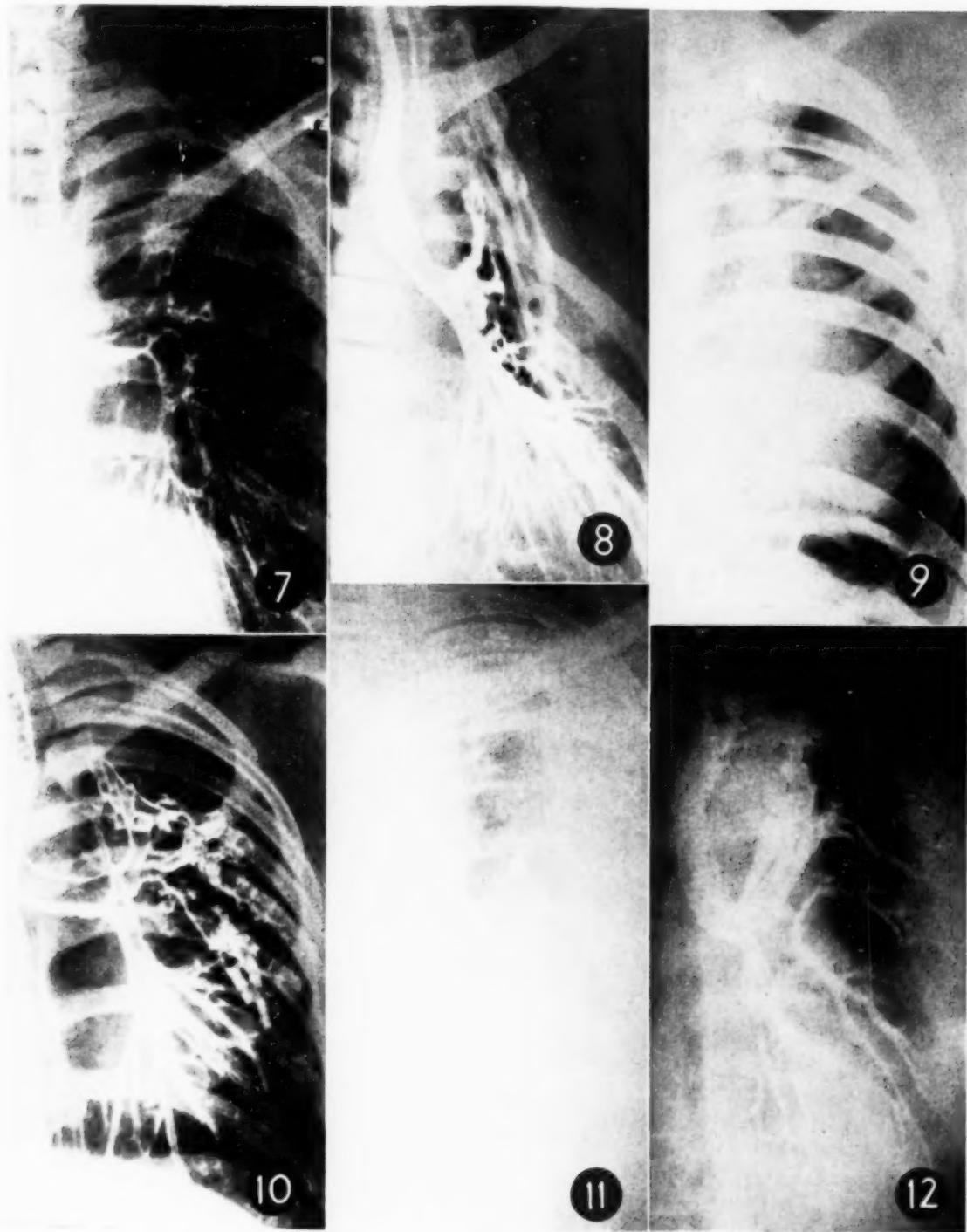
In these cases X-rays after instillation of lipiodol were taken in the erect position. The normal slope of the left main bronchus and its distortion to a wide *u* and a narrow *u* by left upper lobe tuberculosis have been shown. The results are:

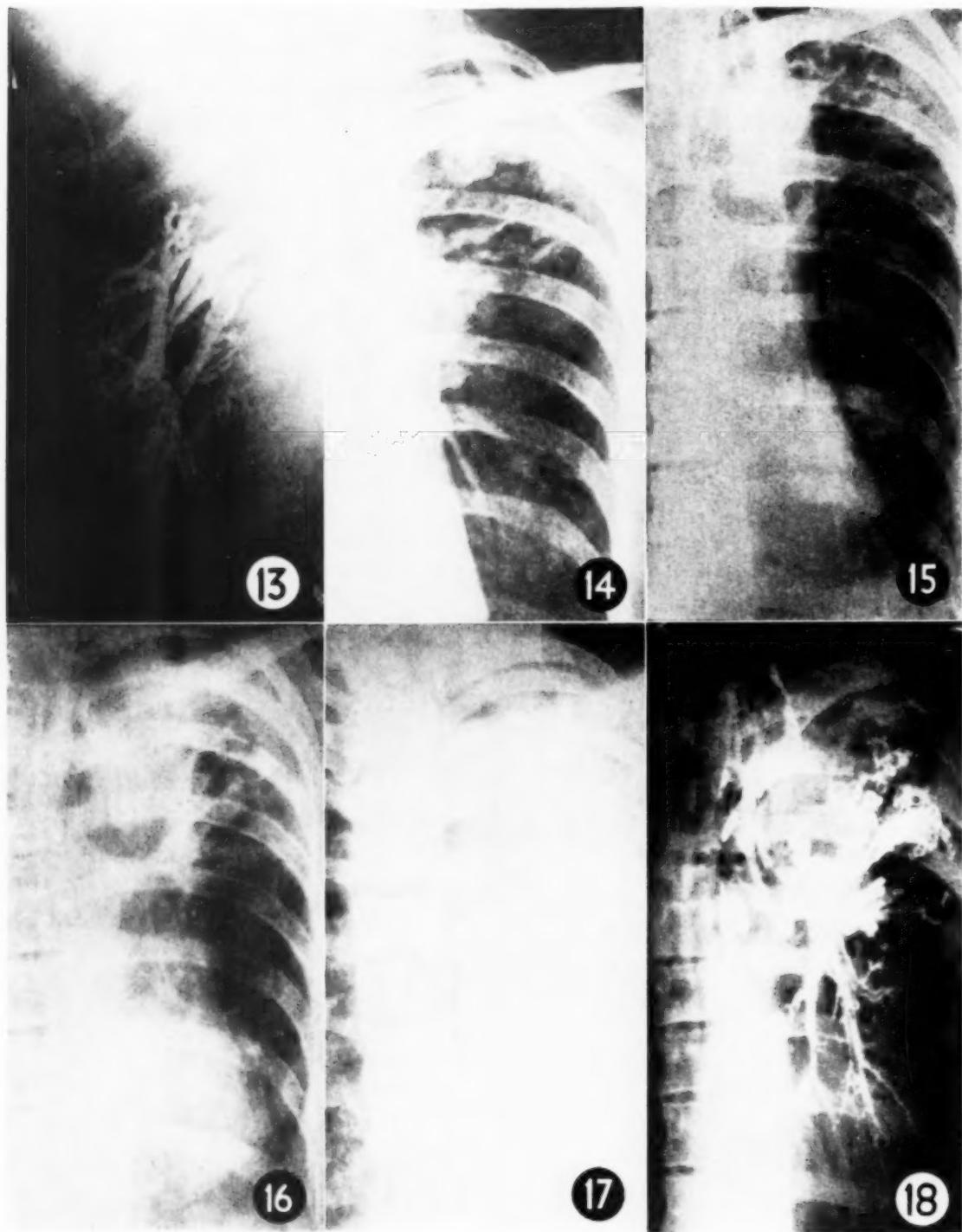
1. pooling of secretion in the left main bronchus,
2. pulling up and distortion of the opening of the left lower lobe bronchus,
3. possible narrowing of this opening and interference with drainage from the left base.

Pathologically these complications may:

1. lead to serious endobronchial damage in the left main bronchus, or exacerbate and prolong damage already present,







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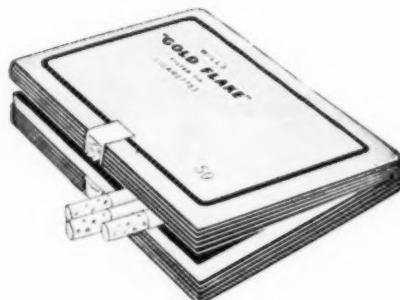
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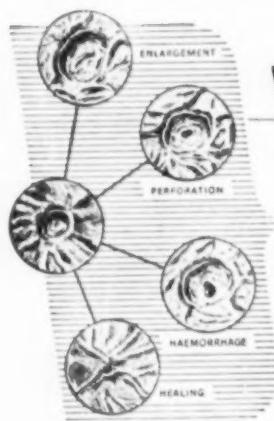


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2. endanger the left lower lobe either by inadequate drainage from the distortion described and from acute endobronchial disease, or by ultimate stenosis of the left main bronchus.

On bronchoscopy it is well recognized that the left base is often difficult to reach. It is suggested that the process described here is often the reason for this.

Clinically, apart from bronchography, bronchoscopy, or tomography at the depth of the main bronchi, it is difficult to see how the condition can be diagnosed.

If one accepts these possible and not uncommon complications of left upper lobe tuberculosis, some suggestion as to the treatment of such cases can be put forward:

1. Before discharging a patient with left upper lobe tuberculosis from hospital, the left lung should be bronchographed and the patient bronchoscopy. In this way more acute endobronchial disease would be discovered and healed by antibiotics. Ultimate stenosis would thus possibly be avoided in many cases.

2. If considerable distortion is found it may be advisable to perform a one- or two-stage thoracoplasty to establish more physiological conditions even though the tuberculous disease is apparently quiescent.

3. If in a case where upper lobectomy is contemplated, inflammation and distortion of the left bronchial tree

of the nature described is discovered, an initial thoracoplasty will probably help to heal the endobronchitis and also establish better drainage from the left base. Post-lobectomy complications will therefore be lessened.

SUMMARY

1. The vulnerability of the left main bronchus in pulmonary tuberculosis is discussed.
2. A common type of distortion of the left bronchial tree is described and illustrated by cases.
3. Possible reasons for a slow progression to ultimate destruction of the left lung are put forward.
4. Suggestions as to modifications in treatment to avoid the complications arising from this distortion are made.

The cases for this article were collected whilst I was working as a Senior Medical Officer at the King George V Hospital, Durban, and the article is submitted by me working in conjunction with the C.S.I.R. Research Unit in Tuberculosis, King George V Hospital, Durban. I wish also to thank the Secretary for Health for permission to publish.

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DUPLICATION OF THE OESOPHAGUS

REPORT OF A CASE IN AN INFANT

• FRANK WALT, M.R.C.S., L.R.C.P., D.C.H. (ENG.)

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Tumours in the mediastinum are of special interest because of their varied origins. They may occur as leiomyomas, polyps, hemangiomas, neurofibromas or cysts. Cysts are rare. They appear to originate from a bronchus but really arise from the oesophagus as a diverticulum. Because the fistulous opening between oesophagus and cyst is usually closed, thus preventing the entry of barium during radiological examination, their recognition as cysts during infancy is not common. A case in an infant aged 9 months who was successfully operated upon is reported.

CASE REPORT

T. S., a male infant, was born normally at term on 7 November 1950 weighing 8 lb. He was the second child, the mother having had 3 miscarriages before the birth of her first child, who was normal. There was no history of allergy or significant disease in the family and the mother's blood Wassermann reaction was negative. The baby was never breast-fed, but progressed satisfactorily until 3 months old.

On 1 February 1951 he was referred to the Children's Hospital, Addington, with a diagnosis of asthmatic bronchitis associated with diarrhoea and vomiting. He had been perfectly well until one week previously, when he developed a cough, which became worse and was followed

by fever, diarrhoea and vomiting. Examination in the out-patient department by the writer revealed crepitations anteriorly and at the base of the right lung and he was admitted with a tentative diagnosis of bronchopneumonia. The left ear-drum was red and the temperature was 101.6°. Response to injections of procaine penicillin 300,000 units daily for 6 days was very rapid.

X-ray of the lungs (Fig. 1) taken on the day of admission did not show any parenchymal lung changes. There was a large oval left posterior upper mediastinal mass with minimal displacement of the mediastinum. No bone or disc lesion was seen. Screening did not show any change in appearance of the opacity, which did not pulsate or displace the oesophagus or trachea. Radiological diagnosis (tentative): congenital cyst or neoplasm. The child was discharged symptom-free after 11 days in hospital but 9 days later the nose became blocked, the cough returned and there was some wheezing in the lungs. There was some response to nose drops but after 3 weeks and again at the age of 5 months the symptoms recurred, with fever, dyspnoea, rhonchi in both lungs and some subcostal recession of the chest; so the child was re-admitted to hospital. He looked ill and there was dullness to percussion at the right base, with crepitations at both bases. The rectal temperature remained about 99.6°, with a white blood cell count of 13,950. Despite his illness he

weighed 14 lb. 2 oz., having gained 3½ lb. in 2 months, and X-ray did not show any change in the mass nor did a barium swallow reveal any oesophageal connection, displacement or compression. On occasions during this period the dyspnoea was worse during feeding, but the child gained weight and recovered well.

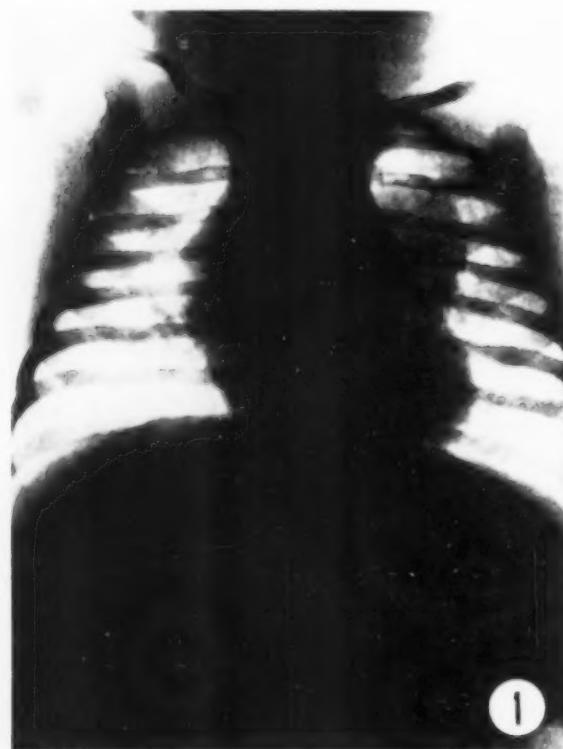


Fig. 1. X-ray of lungs: P.A. view: Shows large oval mediastinal mass in left upper zone.

At home in the following months he suffered 4 more attacks of dyspnoea, each occurring after a feed and lasting for half an hour to 4 hours. The attacks distressed both the mother and the child and another X-ray showed an increase in the size of the mass. An attempt at bronchoscopy failed because a small enough instrument was not available, and it was followed a week later by another attack of bronchopneumonia and then 'asthma'. These episodes of respiratory infection and wheezing became more severe and frequent and X-ray showed the mass to be increasing in size; so it was decided to excise the cyst. The operation had to be postponed because of a further attack of bronchitis with otitis media, but it was eventually performed by Mr. A. Radford at King George V Hospital on 16 August 1951. The infant was then 9 months of age. Anaesthesia was induced with ethyl chloride and ether and continued with sodium pentothal and oxygen while local anaesthesia was also used. A curved postero-lateral incision was made and small portions of the fourth and fifth ribs were removed. A

somewhat blue cystic mass was seen extrapleurally pushing forward against the left upper lobe and partially adherent to it and the oesophagus. The cyst was dissected free and the posterior pedicle tied, but on removal it was torn, and about one ounce of thin chylous-like fluid escaped. Penicillin was administered before and after the operation and apart from pyrexia for a few days the infant made a rapid and uneventful recovery.

Follow-Up

The patient was seen on 1 May 1952 9 months after operation, when he weighed 25 lb. and was 31 inches long. Since operation he had been very well except for 2 minor attacks of coryza. He had not had any wheezing, fever or choking episodes, and had taken his feeds well, cut 11 teeth and progressed normally. X-ray of the lungs taken on that date showed no evidence of oesophageal or intrabronchial pathology. The lung fields appeared normal and no mediastinal pleural or diaphragmatic anomaly was noted.

When last examined in February 1953 the patient had recovered from whooping cough and measles and was perfectly well. X-ray of lungs then taken appeared normal.

Pathological Report

Macroscopically there was a cyst with a cavity 2.5 cm. in diameter covered by muscle, which had contracted down considerably, reducing the size of the cyst compared with the radiological shadow. There was a hole 0.5 cm. in diameter at one end. Microscopically (Figs. 2 and 3) 3 layers of unstriped muscle were seen, the middle longitudinal layer containing some small ducts lined by cuboidal cells. Epithelium composed in parts of vacuolated polygonal cells lined the cyst, some of the superficial cells being ciliated while in other parts the epithelium was more typically squamous.

DISCUSSION

The rarity of oesophageal cysts in the mediastinum is evident from the small numbers reported in the literature, Patterson¹ (1932) having found only 62 cases of benign tumour of the oesophagus in the literature between 1717 and 1932. Moersch and Harrington² (1944) reviewing 7,459 post-mortem examinations performed at the Mayo Clinic found 44 symptomless tumours, only 2 being cysts. Of 11,000 patients with dysphagia, 15 had benign tumours of the oesophagus, only one being a cyst, which was successfully removed. Three mediastinal cysts in infants aged 22 months, 7 weeks and 3 months were described by Mixter and Clifford³ in 1929, 2 being gastrogenic and the other bronchogenic in origin. Gross *et al.*⁴ (1952), in reviewing 68 cases of duplication from the Children's Hospital, Boston, over a period of 22 years, found 13 oesophageal cysts, only one of which showed any connection with the oesophagus after a barium swallow. Of these cases 18 had been detected before 1940 and 49 were diagnosed during the following 10 years. This suggests that the lesion is more common than previously reported. Two of the infants reported by Mixter and Clifford³ (1929) died following operation but more recently improvements in anaesthesia and surgery have led to successful



Fig. 2. Portion of cyst wall showing 3 muscular layers and pseudo-columnar epithelium. x 125.

removal at all ages by Dickson, Clagett and McDonald⁴ (1946), Rosenak and Van Vactor⁵ (1951), and many others. Marsupialization was popular once but the cysts usually peel away from the oesophagus fairly easily and even the very young patients recover quickly, and the possible complications of recurrent pneumonia, atelectasis, bronchiectasis, haemoptysis and even haematemesis are prevented.

Very recently Gross *et al.* (1952) have taken a stand on the classification of these cysts and prefer to call them duplications of the alimentary canal, thus discarding such terms as gastrogenic cyst, enteric cyst, bronchogenic cyst, etc. They accept Bremer's⁶ theory of incomplete vacuolation of the intestinal lumen as the cause and origin of these cysts and doubt whether they are ever of bronchogenic origin. Histologically there is a mucosa similar



Fig. 3. Section showing ciliated epithelium in part of the cyst lining. x 320.

to that found in the alimentary canal, one or several muscle layers, often a well-defined serosa, and interlacing muscle fibres in those cysts contiguous with the bowel. In fact the microscopic picture bears a striking resemblance to normal bowel, but both respiratory and intestinal epithelium may be found in the same cyst (Smith-1930).⁷ Thus the type of mucous membrane varies between colonic, gastric, small intestine and pseudo-columnar. The contents of the cysts also vary and may be clear and colourless, mucoid or haemorrhagic, thick and creamy, or resembling chylous fluid.

Clinically symptoms may only present after 20-40 years of age but when the lesion is discovered at an early age in infancy it usually follows a routine radiological examination of symptoms of cough, dyspnoea, unexplained fever, recurrent pneumonia, atelectasis and dysphagia. It is not usual to get wheezing and asthmatic-like attacks as have occurred in the case described.

A barium-swallow examination should always be carried out even though a connection with the oesophagus is uncommon, because an indentation by the cyst may be seen. Wyllie and Pilcher⁸ (1943) state that these cysts are always in the posterior mediastinum and are thus distinguished from dermoids and cysts of pericardial origin.

SUMMARY

1. The successful removal of an oesophageal cyst (duplication of oesophagus) from an infant aged 9 months is reported.

2. Common symptoms were dyspnoea and wheezing very like asthma, most liable to occur soon after a feed. At other times, fever, cough and dyspnoea suggested pneumonia.

3. Histologically the cyst lining was typical of intestinal mucous membrane but ciliated epithelium was also present.

4. Recent reports suggest that these cysts are more common than previously realized and that they are really duplications of the intestine.

5. Photomicrographs are reproduced which show both intestinal and bronchial types of mucous membrane lining the cyst.

Thanks are due to Dr. H. L. Wallace, Senior Visiting Pediatrician, Children's Hospital, Addington, under whose care the

infant was admitted, for helpful criticism; to Dr. H. Holmes for Radiological Reports; and to Dr. J. Tanchel, Medical Superintendent, for permission to publish. I am greatly indebted to the Medical Superintendent and Staff at King George V Hospital, Springfield, for their help and co-operation and for the reproductions.

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Yellow fever has in the past been a constant subject of tales of terror. To-day epidemic yellow fever has practically disappeared from the face of the globe. However, in parts of tropical South America and Africa there still exists vast 'endemic' yellow fever areas, zones where the virus persists in a latent form.

The yellow fever virus is carried from man to man by the mosquito *Aedes aegypti*, which breeds in the proximity of dwelling houses. The danger of epidemics has been banished

by the elimination of the breeding places of the mosquito carrier, and, more recently, by the spraying of houses with insecticides.

Since 1932 an endemic form of the disease has been recognized which has been called sylvan or bush yellow fever. This infection is found only in the great tropical forests and it is transmitted by other species of mosquito than the *Aedes aegypti*; there is mass infection of the monkeys, which thus constitute an immense virus reservoir. The disease may be accidentally transmitted from monkey to man by mosquitos which live near the tops of trees far from human habitation. It is for this reason that lumberers and hunters become the

only victims, while populations living even on the edge of the forest remain unaffected. Systematic vaccination is the only effective weapon against this endemic form of the disease, for there is no way of destroying all the infected forest creatures.

Although endemic yellow fever is not a great danger in itself, it represents a serious threat when, as sometimes happens, there is in proximity to such endemic zones a 'receptive' area characterized by a dense population and the presence of both monkeys and of *Aedes aegypti* mosquitoes. Once the virus was introduced into such a 'receptive' zone, it could spread with lightning speed. Countries which consider themselves as 'receptive' put up very strong quarantine barriers and insist on disinfection of aircraft and ships and vaccination of travellers.

The World Health Organization has undertaken an exact and detailed study of the real extent of the African endemic yellow fever areas. To demarcate its southern limits, thousands of blood samples have been taken and laboratory tests made in the last 2½ years at the Yellow Fever Research Institute, Entebbe (Uganda), and at the South African Institute of Medical Research, Johannesburg.

The discussions at this session were based largely on experience in America, and in particular in Brazil, where urban epidemics have been practically unknown for the past 50 years, but where there are still wide areas in which the bush yellow fever infection persists. An important objective was, through the delimitation of the African zones, to facilitate free traffic of people and goods.

PASSING EVENTS

UNION OF SOUTH AFRICA : DEPARTMENT OF HEALTH

BULLETIN NO. 38 OF 1953, FOR THE 7 DAYS ENDED
THURSDAY, 17 SEPTEMBER 1953

PLAQUE : SMALLPOX

Nil.

TYPHUS FEVER

Natal. One (1) Native case at Padlock in the Port Shepstone district. Diagnosis confirmed by laboratory tests.

EPIDEMIC DISEASES IN OTHER COUNTRIES

At date of latest available information there existed:

Plague in Phanthiet (Viet-Nam).

Cholera in Bombay, Calcutta, Madras, Visakhapatnam (India).

Smallpox in Bombay, Calcutta, Cochin, Kanpur, Madras, Nagapatinam (India); Saigon-Cholon (Viet-Nam).

Typhus Fever: Nil.

PROTECTION OF THE INFANT DURING THE PERINATAL PERIOD

An International Conference on this subject was held in Brussels from 17-23 September 1953 under the aegis of WHO. It was attended by obstetricians, paediatricians, midwives and nurses from the United Kingdom, Belgium, France, the Netherlands, Sweden, Norway, Denmark and Finland.

Even in countries where the infant mortality has been greatly reduced the threat to the infant in the late phases of pregnancy, birth, and the first weeks following birth (now known as the *perinatal period*) remains a very real one, and more children die at this time than in any corresponding period in the first year of life or subsequently. There has been no substantial reduction of *perinatal mortality*. For example, in Belgium in 1890-1900 the annual deaths of infants in the first 5 days were 10.42 per 1,000 live births; in 1951 the rate was 10.51.

The problem of *premature birth* was also considered at the Conference.

WORLD BIRTH AND DEATH RATES, 1952

The tables presented in the latest *Epidemiological and Vital Statistics Report*¹ show that during 1952 the world's health continued generally to improve in many countries. Almost everywhere in Europe, death rates continued downward even in those countries which had reached a record low in 1951. Births were in general stationary and the net result is thus a slightly higher over-all rate of population increase in the areas for which information is given.

Births. Out of a total of 37 countries, 13 show no change in birth rates, 13 register a slight rise, and 11 a small drop. However, in general the 1952 figures are higher than the median birth rates for the years 1928-38.

1. *Epidem. Vital Statist. Rep.* (1953), **6**, 159.

Death Rates give striking evidence of the success of continuing efforts towards the improvement of their peoples' welfare in many countries. Comparison of rates from 37 countries for 1951 and 1952 shows that deaths are lower in 26 countries, have remained stationary in 8, and have risen only in 3.

WHO REGIONAL OFFICE FOR EUROPE

A recommendation that the Regional Office for Europe of the World Health Organization should be permanently installed in Geneva was made by the WHO Regional Committee for Europe, at its Third Session in Copenhagen (Denmark). Hitherto the World Headquarters of WHO in Paris has served as the European Regional Office. The matter will be considered by the WHO Executive Board at its next meeting in Geneva in January 1954.

WHO EXPERT COMMITTEE ON RHEUMATIC DISEASES

The First Session of the WHO Expert Committee on Rheumatic Diseases met in Geneva, in September 1953 under the chairmanship of Dr. W. S. C. Copeman, Physician-in-Charge, Department of Rheumatic Diseases, West London Hospital (U.K.). Representatives from 6 countries attended, viz. the United Kingdom, France, the Netherlands, Sweden, Argentina and India.

The Committee deprecated the indiscriminate use of Cortisone and ACTH for arthritic conditions. The Committee consider that the hormone treatments are still in the experimental stage and should be reserved for selected cases under the control of specialists attached to hospital departments and clinics.

They insisted however that there existed a number of well-tried treatment methods for rheumatic diseases which yielded good results, and that the belief of many sufferers that these diseases were incurable, untreatable and usually completely disabling was often unfounded.

Since there are at present no proven preventive measures which can be applied to this group of diseases, the Committee stressed the importance of improving facilities for early recognition and treatment. In their opinion, medical education concerning this group of diseases had often been much neglected, and they therefore recommended that practitioners should be instructed in the modern methods of early diagnosis and treatment now available, and that larger special centres for rheumatic diseases should be developed in the teaching hospitals. They advised that specialization in the study of the rheumatic diseases should be encouraged.

The economic importance of these diseases was strikingly illustrated by statistical studies from a limited number of countries. In Denmark rheumatic diseases cost the community some 25 million dollars each year for treatments, loss of earnings and disablement benefits. Seven million sick-days per year from this cause mean for Denmark a loss of approximately 20,000 working years, or in other words 20,000 people are unemployed all the year round because of these diseases.

In Sweden 80 to 100 thousand people are incapacitated each day. In France the cost of rheumatic disease reached

at least 3 milliard francs in the Paris area alone. In the United States more than 10 million people over 14 years of age claim to be suffering from 'arthritis' or 'rheumatism'.

The Committee suggested that the World Health Organization could play an essential part in combating this serious public health problem by assisting in the planning and execution of further surveys of rheumatic illness especially in the medically less-developed countries, and by providing facilities for exchange of information on important fundamental research now being developed in many parts of the world on different aspects of rheumatic disease.

FIVE TRAVELLING FELLOWSHIPS

Five Travelling Fellowships each of the value of about £500 for one year have been made available to South African Graduates in medicine or medical science through a trust established by Mr. A. E. Adams in memory of his son Cecil John Adams, who lost his life in the last war.

Applicants for the Fellowships who must have shown promise of profiting from further study overseas and must have been resident in South Africa for at least three years, can obtain the prescribed form which must reach the trustee, J. J. le Roux, The South African Association, 6 Church Square, Cape Town, by 7 November, 1953.

THE SOUTH AFRICAN MEDICAL AND DENTAL COUNCIL

The Minister of Health has appointed the following persons as members of the South African Medical and Dental Council

for the period 1 January 1954 to 31 December 1958: Dr. J. J. du Pré le Roux (Chief Health Officer for the Union of South Africa), Dr. I. R. Vermooten (Commissioner of Mental Hygiene), Prof. S. F. Oosthuizen, Dr. R. V. Bird, D.D.S., Dr. J. A. van Schalkwyk, Mr. J. F. Ludorf, LL.B., Mr. W. H. Rood, Dr. C. J. G. Hunter (Medical Officer to the South West Africa Administration).

DR. A. J. R. VAN RHYN'S APPOINTMENT

The *Government Gazette* of 18 September notifies the appointment of Dr. the Hon. A. J. R. van Rhyn as Minister of Health and of Mines with effect from 8 September 1953.

The Medical Association of South Africa extends to Dr. van Rhyn its congratulations and best wishes and looks forward to a continuance of its cordial relations with the Minister and his Health Department.

* * * *

Members are reminded that the Association has an arrangement with the Atlas Assurance Company whereby they may insure themselves against claims made by third parties and arising out of their practices.

By agreement with the Federal Council the policy contains special provisions applicable only to members of the Association and which cannot be supplied by any other company.

Enquiries should be addressed to the office of the Association (P.O. Box 643, Cape Town) or to any of the offices of the Atlas Assurance Company.

REVIEWS OF BOOKS

HEALTH IN THE TROPICS

How to be Healthy in Hot Climates. By Eleanor T. Calverley, M.D. Second Edition. (Pp. 286 + vi. \$3.50.) New York: Thomas Y. Crowell Company. 1953.

Contents: 1. Is it Safe to Live in the Tropics? 2. Preparation for Life in the Tropics. 3. Equipment for the Traveller. 4. The Journey. 5. Adjusting to the New Environment. 6. Women and Children in the Tropics. 7. A Home in the Tropics. 8. Household Precautions. 9. Servants in the Tropics. 10. Food and Health. 11. A Family in the Tropics. 12. What to do in Times of Illness. 13. Common Ailments. 14. Meeting Emergencies. 15. When the Baby Arrives Before the Doctor. 16. Diseases of the Skin. 17. Diseases of the Eye. 18. Malaria and Black-water Fever. 19. Some Tropical Fevers Other than Malaria. 20. The Dysenteries: Amoebic and Bacillary. 21. Intestinal Diseases other than the Dysenteries. 22. Miscellaneous Tropical Diseases. Appendices A, B, C and D. Index.

This book is primarily intended for lay people who are going to live in the tropics.

Written in simple and easily understandable language it contains valuable advice about what to do before leaving for the tropics, what equipment to take, illnesses which occur there, and their prevention and treatment. There is sound information about the need for obtaining medical and dental advice and treatment and immunizations against illnesses before leaving.

How to adjust oneself to the new environment, and the social and psychological aspects of entering into the new surroundings are very well dealt with. Many of the recommendations about how to get on with your fellow men are applicable to any part of the world, and the advice given is sound.

The chapters dealing with food and dietary are practical, without any fads, and make provision for the person with an average income.

The general descriptions of the illnesses which occur are correct. Here and there, there may be a few things with which one may not agree.

It might look as if there is a little too much instruction about 'treatment' by lay persons, particularly with antibiotics, for many of these remedies should really only be administered under medical supervision, but it must be borne in mind that this book may have to be used by persons who live in isolated places far away from a doctor. It is however stressed that in most cases the advice of a doctor must be sought.

The tables at the end of the book are excellent, particularly those dealing with communicable diseases. They are well set out and easily readable and understandable.

This is a valuable book and fills a long-felt want. It should be in the home of all persons living in the tropics, whether they come from other parts or not.

ELEMENTARY PHYSICS

Elementary Physics for Medical, First Year University Science Students and General Use in Schools. By G. Stead, M.A. (Cantab.), D.Sc. (Lond.), F.Inst.P. Eighth Edition. (Pp. 578 + xv, with 446 illustrations. 18s.) London: J. & A. Churchill Limited. 1952.

Contents: Part I. Mechanics. 1. Units and Dimensions. 2. Displacement, Velocity and Acceleration. 3. Momentum and the Laws of Motion. 4. Composition and Resolution of Forces. 5. Moments and Parallel Forces. 6. Centre of Gravity. Stability of Equilibrium. 7. Friction. 8. Work, Energy and Power. 9. Simple Machines.

Part II. Hydrostatics and Properties of Matter. 10. Pressure, Density and Specific Gravity. Floating Bodies. 11. Pressure of Gases. 12. Hydrostatic Machines. Pumps. 13. General Properties of Matter.

Part III. Heat. 14. Measurement of Temperature. 15. Expansion of Solids and Liquids. 16. Expansion of Gases. 17. Measurement of Quantity of Heat. 18. Change of State—Solid to Liquid. 19. Change of State—Liquid to Vapour. 20. Relation between Heat and Work. 21. Convection, Conduction and Radiation.

Part IV. Sound. 22. Wave Motion. 23. Vibrations of Strings and Air Columns.

Part V. Light. 24. Rectilinear Propagation of Light. 25. Reflexion of Light at Plane Surfaces. 26. Reflexion of Light at Spherical Surfaces. 27. Refraction of Light at Plane Surfaces. 28. Thin Lenses. 29. The Eye and Optical Instruments. 30. Dispersion of Light. 31. The Wave Theory of Light.

Part VI. Magnetism. 32. Magnets and Magnetic Fields. 33. Magnetic Measurements.

Part VII. Electrostatics. 34. Electrification by Friction and Induction. 35. Quantity of Electricity or Charge. 36. Electrical Potential and Capacity.

Part VIII. Current Electricity. 37. Magnetic Effect of an Electric Current. 38. Galvanometers. 39. Current, Electromotive Force and Resistance. 40. Measurement of Current, Electromotive Force and Resistance. 41. Heating Effects of an Electric Current. 42. Chemical Effects of an Electric Current. 43. Electromagnetic Induction. 44. Conduction of Electricity Through Gases. Cathode Rays. Electrons. 45. X-Rays. Ionization of Gases. 46. Radioactivity. Notes on Trigonometrical Functions, etc. Examination Questions. Answers to Examples. Index.

Of the many textbooks written to meet the needs of the first-year university student this is one of the best. It explains simply and clearly the fundamental principles of elementary



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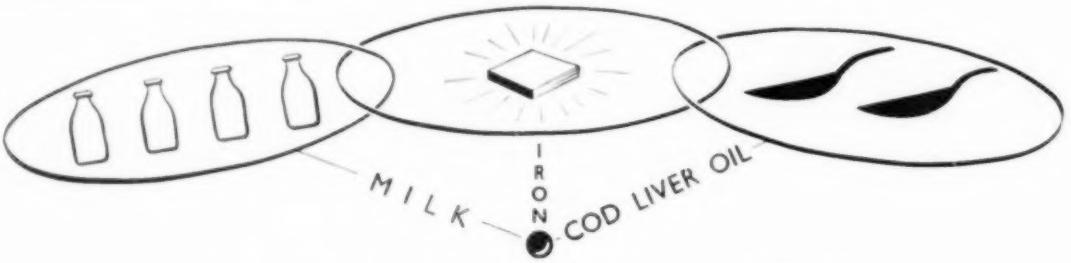
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physics—the groundwork of definitions and physical laws, and the essential mathematical framework of the subject.

It is well illustrated with excellent diagrams. There is a good selection of worked examples and easy problems for the student to try for himself. Brevity in the description of practical applications and experimental details has kept the book to a reasonable size.

It thus provides, in a handy form, the basic facts which the student requires to study carefully, and of which, too often, his lecture-notes give only a garbled and inaccurate version.

The appearance of the book has changed little since the fifth edition appeared in 1938, but detailed examination shows that there have been numerous small improvements.

A few further improvements suggest themselves:

Specific gravity is defined (p. 85) in terms of water at 4° C. This makes it numerically equal to the density in c.g.s. units, and therefore redundant as a physical quantity; moreover, it is not the quantity that is measured in the specific gravity experiments described (pp. 92-97). These measure the ratio of the density of a substance to that of water at the temperature of the experiment. A definition on these lines is much more useful in practice.

An account of the Westphal balance might well be substituted for that of Nicholson's hydrometer (p. 97).

Coefficients of linear and cubical expansion are defined relative to the length or volume of the substance at 0° C. This refinement seems unnecessary for solids and liquids, and it makes the definition meaningless for solids which melt below 0° C. and for liquids which solidify above that temperature.

The definition of specific heat as a ratio (p. 167) is less useful than one in terms of calories per gram per degree. It makes it difficult to explain what is meant by variation of the specific heat of water with change of temperature, and it cannot be applied to specific heats at temperatures at which water cannot exist as a liquid.

HINDU PSYCHOLOGY

Mental Health and Hindu Psychology. By Swami Akhilananda of the Ramakrishna Order of India. (Pp. 231 + xix. 16s.) London: George Allen & Unwin Limited. South African Representatives: Howard B. Timmins, Cape Town. 1952.

Contents: 1. Therapeutic Value of Indian Psychology. 2. How to Overcome Anxiety. 3. Conquest of Fear. 4. Conquest of Frustration. 5. Forgiveness or Aggression. 6. Competition or Co-operation. 7. How to Overcome Conflict and Tension. 8. Social Adjustment. 9. Escape through Alcoholism. 10. Power of Mind. 11. Power of Love. 12. Love, Marriage and Religion. 13. Religion and Integration. 14. Technique of Integration of Personality. 15. Is Religion Escapism? 16. Power through Religious Practices. Bibliography. Index.

In this book may be found an intelligent, stimulating and delightful presentation of Hindu philosophical teachings. The author has lived since childhood in contact with the systems of mental training and religious aspirations he describes and, furthermore, is well acquainted with Western sociological and psychological advances. We have already heard from Occidental writers, some as distinguished as Aldous Huxley and Isherwood, of the significant lessons in human relationships and social attitude which wait to be learnt by the West from Oriental philosophy.

The author's approach is a religious one and his attitude one of spiritual idealism. Hindu philosophy is based on the Vedanta, a profound lore derived from 14 centuries of folk experience. The teaching aims to tell how trivial are the ambitions for which men waste themselves and to stress how pointless are many worldly preoccupations. While the biological urges are not roundly condemned, they must be made subordinate to the dominant desire for abiding joy. The Hindu emphasizes the cultivation of a peaceful mind from which all tensions are banished; aggression of any sort is deplored and friendship towards all men and beasts is cultivated. The great discipline is to make the mind peaceful. Because Indian philosophy has grown out of religious concepts, particular weight is given to the study of religious experiences and the methods by which they can be made to occur. The goals to which the Hindu devotee aspires are self-knowledge, the super-conscious state and God.

It is not the place of scientific criticism to decide the validity

of these religious attitudes. However, in this book they are set forward as the basis also of Hindu psychology. If these spiritual disciplines do indeed serve as the basis of Indian medical psychology, the mentally-ill person in the East does not appear to be offered therapy which is of much practical value. The free admission must be made that the insights of Western psychology, achieved through adherence to scientific standards, have been disappointing both in their paucity and their limited usefulness; nevertheless, it is likely that Western psychology is on the threshold of significant progress. On the other hand in sacrificing objectivity, Hindu psychology seems deprived of the realization of what the world is really like. To the Western psychologist the Hindu system is inadequate particularly in its failure to take any sort of note of the irrational components of man and the aggressive, passionate nature of his unconscious strivings. The cases are very rare indeed when an anxious person will be helped by the mere admonition that it is useless to worry. 'We should remind ourselves that there is a reservoir of strength within us. We should tell ourselves that the petty changes in the world should not affect our mind.'

This failure to take account of man's actual functioning may be the chief source of the sense of unreality the book induces in the reader. While emphasis on the cultivation of an untroubled mind may enable some individual adherents of the Hindu teaching to feel less agitated, the system is not convincing in its psychological generalizations and does not often depart from the obvious. Over and above this shortcoming, the murmur of the author's attempts to reconcile science and religion invests most of the pages with additional vagueness; occasionally he betrays himself into frank naivety, as when he says seriously, 'There have been cases of frustration even in children.'

SPLENECTOMIE

Splenectomy. By S. J. Eelkman Rooda. (Pp. 176. f.8.50.) Assen: Van Gorcum & Comp. N.V. 1953.

Inhoud: 1. Inleiding. 2. Physiologie. 3. Pathologische Anatomie. 4. Anatomie. 5. Liggingveranderingen van de Milt. 6. Bijmilt en Splenosis. 7. Miltrupturen. 8. Bloeding uit de Arteria lienalis. 9. Infecties van de Milt. 10. Milttumoren. 11. Cysten van de Milt. 12. Maligne Tumoren. 13. Ziekte van Hodgkin. 14. Ziekte van Gaucher. 15. Ziekte van Niemann-Pick. 16. Ziekte van Hand-Schüller-Christian. 17. Haemolytische Anemie. 18. Primaire- en Secundaire Thrombocytopenie. 19. Chronische Granulocytopenie. 20. Splenogene Anemie. 21. Splenogene Panhaemocytopenie. 22. Leukaemie. 23. Paroxysmale Nachtlijke Haemoglobinurie. 24. Portale Hypertensie. 25. Splenectomy in de Graviditeit. 26. Techniek. 27. Kneelen van de A. lienalis. 28. Samenvatting. 29. Summary. 30. Résumé. Geraadpleegde Literatuur.

Hierdie is die 23de monografie in die reeks: Van Gorcum's Medische Bibliotheek, wat uit afsonderlike werke oor uiteenlopende mediese onderwerpe bestaan. Die onderhavige deel handel oor die milt en bespreek dit uit 'n tal van verskillende aspekte, soos te sien is aan die 27 meesal korte maar kernagtige hoofstukke.

Slegs 4 bladsye word gewy aan die tegniek van splenectomy, sodat die banaming van hierdie monografie iewat misleidend is en nie die ware omvang daarvan verraai nie. Die inhoudsopgawe voorin, sowel as die uitgebreide aantal werke wat geraadpleeg is, getuig van die wye en diepgaande studie van die literatuur wat onderneem is ter samebrenging van die belangrikste feite oor en stoornisse van die milt in die vorm van 'n maklik leesbare boek.

Die waarde van die werk word ook verhoog daar deur dat etlike uitvoerige beskrywings van spesifieke siektegevalle voorgele word by wyse van opheldering. En aan die einde volg samevattings in Nederlands, Engels en Frans. Vir die nagraadse student in die snykunde behoort hierdie boek 'n kostelike aanvulling vir die boekery te wees.

ACUTE POISONING

The Symptoms and Treatment of Acute Poisoning. By G. H. W. Lucas. (Pp. 308 + ii. 27s. 6d.) London: H. K. Lewis & Co. 1953.

Contents: Introduction. 1. General Considerations. 2. Suggested Supplies and Apparatus. 3. Emetics and Gastric Lavage. 4. Poisoning in Children. 5. Collection and Preservation of Samples for the Analyst. 6. Some Useful Drugs and Preparations. 7. Cases of Poisoning. Index. Tables.

The discovery of new drugs proceeds apace, and in addition to their therapeutic use, problems of poisoning occur from accidental, homicidal or suicidal administration, presenting a challenge and special difficulties for the practitioner. Much information regarding the symptoms and treatment of the new poisons and modern therapy for the older ones is scattered in the literature. In this handy pocket-size volume up-to-date information has been collected for the medical practitioner in a ready reference for 130 of the drugs used or encountered in practice; this includes agents used not only in therapeutics but also those used to kill insects, pests and rodents. Special attention is given to the treatment of poisoning in children, which presents special problems. A useful table of recorded fatal doses of poisons is included in the book.

The pharmacist, the nurse and the layman will find in it sufficient information for emergency treatment of acute poisoning. The student will find it useful in toxicology.

A list of over 50 drugs that should be available as special or general antidotes for emergency treatment indicates the wide variety of poisons that may be encountered. A useful point which should not be overlooked is the information about antidotes sometimes provided on labels or on printed sheets accompanying bottles or containers. With this book reference can quickly be made to concise accounts of the symptoms and treatment of acute poisoning.

YEAR BOOK OF DERMATOLOGY

The 1952 Year Book of Dermatology and Syphilology (December 1951–November 1952). Edited by Marion B. Sulzberger, M.D., and Rudolf L. Baer, M.D. (Pp. 444 with 67 figures. \$6.00.) Chicago: Year Book Publishers, Inc. 1953.

Contents: Introduction. Present Status of ACTH, Cortisone and Compound F in Dermatologic Management. A Guide for the General Practitioner. I. Treatment and Prevention. (a) Endocrine Therapy. (b) Physical Therapy. (c) Other Therapies. 2. Eczematous Dermatitis, Atopic Dermatitis and Urticaria. Allergy. 3. Drug Eruptions. 4. Miscellaneous Dermatoses. 5. Cancers, Precancers, Other Tumors. 6. Fungal Infections. 7. Other Infections. 8. Venereal Diseases and Their Treatment (Exclusive of Gonorrhoea). 9. Investigative Studies. 10. Miscellaneous Topics.

The 1952 Year Book of Dermatology and Syphilology reports the developments in these subjects during the year. The pattern of previous editions is used with the addition of a sub-section on endocrine therapy.

The editors' introductory essay this year deals with cortisone and allied substances in relationship to disorders of the skin. Their evaluation of this line of treatment is for the most part based on their own extensive experience. It is obvious that cortisone and ACTH are playing increasingly important parts in dermatological therapy. Compound F (hydrocortisone), in contrast to cortisone, is stated to show much promise as a local external therapeutic agent for skin diseases. The limitations and the contra-indications of the use of these hormones are properly stressed.

Much space is devoted to the LE cell and LE phenomenon. It is claimed to be as specific for the diagnosis of systemic forms of lupus erythematosus as can be expected of any biological test.

The bulk of the book consists of a survey of all important works connected with dermatology or syphilology. Full summaries are given with critical erudite editorial footnotes on each subject.

These year books occupy a unique niche in the dermatological world. The 1952 edition is well up to the standard of its predecessors. No dermatologist can afford to be without a copy.

CLINICAL OBSTETRICS

Clinical Obstetrics. By Members of the Staff of the Pennsylvania Hospital. Edited by Clifford B. Lull, M.D., and Robert A. Kimbrough, M.D. (Pp. 732 with 392 illustrations. 80s.) London: J. B. Lippincott Company.

Contents: 1. Anatomy and Physiology of Reproduction. 2. Normal Pregnancy. 3. Complications of Pregnancy. 4. Normal Labour. 5. Abnormal Labour. 6. Operative Obstetrics. 7. Puerperal Period. 8. The Newborn. 9. Other Aspects. Index.

Clinical Obstetrics has been produced by members of the staff of the Pennsylvania Hospital and represents methods used and experience gained there.

The book is refreshingly different from the standard textbook on midwifery, the subject matter having been arranged with an eye to convenience and easy reference. It contains many excellent illustrations and diagrams and the chapter on obstetric roentgenology is remarkable for the detail and clarity of its reproductions.

The problem of nutrition in pregnancy is very fully dealt with, incorporating the findings of the Nutritional Research Clinic, which has investigated, in particular, weight-gain and its relationship to prematurity and pre-eclamptic toxæmia.

The management of the obstetric patient in Pennsylvania differs in some respects from ours. Caudal analgesia is extensively employed combined with routine application of forceps when the head is on the perineum. The 'prophylactic' forceps constitute 60% of forceps deliveries. Rotation of the head with forceps is favoured and both the Scanzoni and Key-in-lock manoeuvres are described in detail.

In uterine inertia with a thin tight cervix where the head is low and maternal or foetal distress present, Dührssen's incisions are recommended, while the injection of 1-2 minims of pituitrin is permissible under certain circumstances to expedite delivery of the head.

The chapters on manipulative and operative obstetrics are considerably less detailed than in standard works, owing to the omission of many manoeuvres that have become obsolete with the increased ease and safety of Caesarean section.

This book is a valuable addition to a medical library, reflecting, as it does, present-day thought on the everyday problems the obstetrician is likely to meet in his practice.

PULMONARY TUBERCULOSIS

Pulmonary Tuberculosis. A Handbook for Students and Practitioners. By R. Y. Keers, M.D., F.R.C.P. (Edin.), F.R.F.P.S. (Glas.), F.R.S.E., and B. G. Riden, M.R.C.S. (Eng.), L.R.C.P. (Lond.). Pp. 324 with 150 figures. 24s. 0d.) Edinburgh: E. & S. Livingstone Limited. 1953.

Contents: Preface to Third Edition. Preface to First Edition. Foreword. 1. Historical Survey. 2. Bacteriology. 3. Pathology. 4. Epidemiology and Resistance. 5. Symptomatology. 6. Examination of the Patient. 7. Radiology. 8. Differential Diagnosis. 9. Prognosis. 10. Treatment. Introduction. (a) General Principles. (b) Chemotherapy. (c) Collapse Therapy. (d) Resection. (e) Other Operations. (f) Symptomatic. (g) Minimal Lesion. 11. Complications. 12. After-Care. 13. Prevention.

The advent of really potent anti-tuberculosis drugs such as streptomycin, para-aminosalicylic acid, and isoniazidic acid hydrazide has changed the treatment of pulmonary tuberculosis, and makes this small book welcome. There is a concise account of accepted pathology and bacteriology. Our Cape Town experience, however, does not confirm that the tuberculin test 'may be absent with meningeal tuberculosis' (page 54). Symptoms, often the only evidence of activity of the disease, are correctly stressed. Clinical signs are suitably given, the less valuable, though often traditional, ones being omitted. The importance of radiology in diagnosis and treatment is discussed. The lung segments are well presented and tomographic investigation described. Mass miniature radiography is given its appropriate place. In differential diagnosis those conditions commonly mistaken for pulmonary tuberculosis are well described. I think, however, in malignant disease of the lung sputum examination for malignant cells is always worth while. Factors influencing prognosis are suitably considered. Everyone with experience of tuberculosis realizes the difficulties in forecasting the outcome; the author's sentence, 'often circumstances will intervene to invalidate his forecast', is apt.

The section on treatment is a short, practical and realistic exposition of modern methods. The early case is separately considered; this is important with the numbers disclosed by mass miniature X-ray. Lastly, under Prevention the authors discuss artificial inoculation with B.C.G. and the vole bacillus. Perhaps the term 'immunization' is wishful thinking. It is of course controversial.

The book is well written and easy to read. The X-ray reproductions are well chosen and well reproduced. Intended for students and practitioners it can advantageously be read by more experienced physicians.

HERNIA

Hernia: A Manual for Truss Fitters. By Francis Mitchell-Heggs, T.D., M.B., B.S. (Lond.), F.R.C.S. (Eng.), F.R.C.S. (Edin.). (Pp. 136 + viii, with 97 illustrations. 25s.) London: J. & A. Churchill Limited. 1953.

Contents: 1. Introduction. 2. Medical Terminology. 3. The Bones of the Skeleton. 4. The Joints. 5. The Muscular System. 6. The Nervous System. 7. The Cardiovascular System. 8. The Respiratory System. 9. The Alimentary System. 10. The Genito-urinary System. 11. The Ductless Glands. Reticulo-endothelial and Lymphatic Systems. 12. Inguinal Hernia. 13. Inguinal Trusses. 14. Femoral Hernia. 15. Femoral Trusses. 16. Umbilical Hernia. 17. Ventral Hernia. 18. Truss Fitting. Glossary of Medical Terms. Index.

This little book should prove of great value to an important medical auxiliary service. The outlines of anatomy, though elementary, could be read with profit by many medical practitioners. As is to be expected, the sections dealing most specifically with the subject of Hernia give a great deal of instructive material.

Medical practitioners are usually abysmally ignorant concerning the practical details of truss fitting and could glance through this work with profit.

HYPNOTISM

Medical Hypnosis. By Dr. S. J. van Pelt, Dr. G. Ambrose, and Dr. G. Newbold. (Pp. 190. 13s. 6d.) London: Victor Gollancz. 1953.

Contents: Part I. 1. A Rational Approach to Hypnotism. 2. A Rational Approach to Nervous and Allied Complaints and their Treatment. 3. Hypnosis in the Treatment of the Psychoneuroses. 4. Hypnosis in Miscellaneous Medical Conditions. Part II. 5. Child Guidance and the Approach by Hypnotherapy. Introduction. 6. Types of Children Requiring Hypnosis: Some Case Histories. 7. The Summing-Up: Hypnotherapy versus Other Methods. Part III. 8. Hypnosis in Gynaecology. 9. Hypnosis in Childbirth: Pregnancy and Preparation for Motherhood. 10. Hypnosis in Childbirth: Labour and the Lying-in Period.

This book, despite its catch-eye subtitle of 'New Hope for Mankind', is a reasoned and restrained survey of the medical uses of hypnosis. The three authors are all practising medical men who have written widely on hypnosis, and although this is a book primarily for laymen its standard is not that of many sensational expositions on the same subject. Dr. Van Pelt writes well, and his insistence on the importance of careful case-histories and simple symptom-analysis as a preliminary to any hypnotic treatment is something which other writers on hypnosis might well stress. He is careful to avoid any dramatization and insists that it is the patient who is the potent force in hypnotherapy, not the hypnotist. Dr. Ambrose coins a word which sums up the main use of hypnosis—"detensionization"—and all three authors emphasize the point that hypnosis offers a way of easing tension states which are irreducible by other means, but they do not claim that the method is by any means infallible, and Dr. Ambrose in particular must be congratulated on his forthright confession of failure with certain types of temperamental deficiencies.

This book may be recommended as a corrective to many lurid, highly coloured and uncritical essays on what is still a controversial subject amongst psychotherapists.

INTERNAL MEDICINE

Advances in Internal Medicine, Vol. V. Edited by W. Dock, M.D. and I. Snapper, M.D. (Pp. 464, with figures. \$10.50.) Chicago: The Year Book Publishers, Inc. 1952.

Contents: 1. Diseases of the Pregnant Woman Affecting the Offspring. 2. Catheterization of the Heart. 3. Portal Hypertension and Its Treatment. 4. The Anemia of Infection. XVII. A Review. 5. Gout, a Derangement of Purine Metabolism. 6. Clinical Aspects of Ganglionic and Adrenergic Blocking Agents. 7. Aspects of the Influenza Problem. 8. Experiences with Adrenocorticotrophic Hormone (ACTH) and Cortisone. 9. Abnormal Proteins in Myeloma. Author Index. Subject Index.

This book is a most valuable one and a worthy successor to the previous 4 volumes. The chapter on *Diseases of the Pregnant Woman Affecting the Offspring* is a very useful evaluation of knowledge to date on this subject. The chapter on catheterization of the heart by Professor Richard J. Bing is a very authoritative one and has a very fine summary of the author's original work in this field. Professor Bing emphasizes that in cardiac catheterization a sharp demarcation between the diagnostic and the purely investigative studies

cannot be made, for they are intimately related, and emphasizes that a study of patients, apart from purely diagnostic reasons, results in a better understanding of the disease processes.

The various subjects dealt with are mentioned above in the summary of contents, and it is difficult to pick any particular chapter which is better than any other. The chapter on abnormal proteins in myeloma by Professor J. Waldenström is most stimulating and informative with regard to recent work on the different blood proteins in various conditions.

The book is strongly recommended, and it is hoped that the Editors, Professors W. Dock and I. Snapper of New York, will continue to edit this series of volumes on *Advances in Internal Medicine*.

BLOOD COAGULATION

Human Blood Coagulation and Its Disorders. By Rosemary Biggs, B.Sc., Ph.D., M.D. and R. G. MacFarlane, M.A., M.D. (Pp. 406 + xviii, with illustrations. 32s. 6d.) Oxford: Blackwell Scientific Publications.

Contents: Part I. 1. The Growth of Knowledge of Blood Coagulation. 2. Thrombin, Fibrinogen, the Thrombin-fibrinogen Reaction and Fibrin. 3. Prothrombin. 4. Tissue Thromboplastin. 5. Plasma and Serum Accelerators of Blood Coagulation. 6. Plasma Thromboplastin. 7. The Natural Inhibitors of Blood Coagulation. 8. Clot Retraction. 9. Fibrinolysis. 10. Artificial Anticoagulants and Decalcifying Agents. 11. The Blood Coagulation Factors and the Clotting of Whole Blood and Plasma.

Part II. 12. The Disorders of Blood Coagulation. 13. Fibrinogen Deficiency. 14. Hypoprothrombinemia. 15. The Coagulation Defect in Haemophilia. 16. Platelet Deficiency. 17. Naturally Occurring Anticoagulants. 18. Thrombosis and Anticoagulant Therapy. 19. Artificial Coagulants and Haemostatics. 20. The Significance of Blood Coagulation. Appendices. References. Index.

Knowledge of blood coagulation has greatly increased in recent years and it has become more and more difficult for the average reader to keep abreast of the subject. Each writer is apt to use his own bewildering nomenclature and to stress his own pet theory. In this masterly review the authors have emphasized the difference between 'coagulation factors' which can be accepted because of reasonable proof of their existence and 'phenomena', which while occurring in a test tube are open to a number of interpretations. They have analysed the welter of claims regarding the existence of various 'coagulation factors' and indicate whether or not the conclusions previously reached had been justified. For this reason their own theory of blood coagulation is relatively simple and understandable.

In the second half of the book they discuss the practical consequences of defective blood coagulation and describe the defects encountered in the various clinical syndromes and the rationale behind the methods used in diagnosis. As much of this is based on their own extensive experience it is authoritative, reliable and easy to understand. The technical section is adequate and the bibliography extensive. This book can be strongly recommended as the best which has as yet been written on this subject.

SOCIAL MEDICINE

Social Aspects of Disease. By A. Leslie Banks, M.A., M.D., F.R.C.P., D.P.H. (Pp. 373 + vii. 20s.) London: Edward Arnold & Company. 1953.

Contents: 1. Introductory. 2. Disease Affecting the Body as a Whole. 3. Infectious and Contagious Disease. 4. The Respiratory System. 5. The Circulatory System. 6. The Digestive System. 7. The Blood and Blood-forming Organs. 8. The Urogenital System. 9. Diseases of the Nervous System and Sense Organs. 10. The Skin and its Appendages. 11. Diseases of Bones, Muscles and Joints. 12. Hazards to the Health of Mother and Child. 13. The Infirm and the Incurable. 14. Mental, Psychosomatic and Personality Disorders. Index.

Social medicine is an aspect of medicine: it is concerned with the effects of man's social environment on his health or disease and, conversely, the effect of his state of health or want of it, on him in his relation to his family and larger social environment. Dr. Banks gives in his book a picture of the changing pattern of health and disease of a nation (the British) with the changing social conditions over the years. In the portion of the book dealing with this he achieves his object very successfully. Not quite so successful are the last three chapters of the book. But when he deals with the diseases of the different systems of the body he is least

successful. The author must have realized this, for at the end of each of these sections he has a page or two on 'the social aspects of . . .' (whatever was dealt with in that particular section). In other words, in these chapters the social aspects of disease come in the form of an appendage to rather than the body of the part. It is also disappointing to have nothing on genetics and very little on heredity.

The criticisms offered refer entirely to the social aspects. The book makes interesting reading, and it reads easily and fluently. Its style is much more intimate than that of most text-books of medicine. There is much truth in the author's statement that what with the development of X-rays, clinical pathology, etc. the patient, in passing through a diagnostic machine, is in danger of losing his individuality.

KORRESPONDENSIE : CORRESPONDENCE

SKERPE VAN GESIGSVERMOË. APPLIKANTE VIR STAATSPOSTE

Aan die Redakteur: Die meeste Staatsdepartemente eis, op die geneeskundige sertifikate wat applikante vir poste moet lever, ook dat die juiste gesigskerpe, met en sonder 'n bril, gemeld moet word.

Soms skryf die betrokke dokter „Normaal”, of „Dra 'n bril”; en dit lei tot onnodige korrespondensie en vertraging.

Alhoewel enige aangename maatstaf, wat die grootte van letters, sigbaar met elk oog afsonderlik, op 'n genoemde afstand, voldoende is, word dit aanbeveel dat die oorspronklike kaart van Snellen op 6 meter (20 voet) gebruik sal word. Die normale gesigshoek van 1 minuut (1') is die selfde ongeveer as letters van $\frac{1}{2}$ duim op 20 voet, en word deur $\frac{1}{2}$ beskrywe (of D = 6). Die van 2' as $\frac{1}{2}$ (of D = 12), ens.

F. van der Merwe,
Geneeskundige Hoofinspekteur van Skole
Transvaal.
Pretoria.
18 September 1953.

TOO MANY DOCTORS

To the Editor: In his letter to the Editor in the *Journal of 12 September*, *Old un* touches on something which is of the greatest importance to every general practitioner in the country.

We have now 3 medical schools which are turning out doctors in very large numbers every year. In addition we have a new medical school in Natal and a medical faculty is being brought into being at Stellenbosch.

I think the increase in fees which has recently been decided on by general practitioners is largely a reflection of the growing competition which is insidiously making itself felt. The economic problems of the individual doctor will not be solved by a 5s. increase in a fee, because this is a vicious circle which will become more vicious as the competition becomes more keen as time goes on.

The young doctor to-day finds it very difficult to get going, not only because he is young and inexperienced, but because he has to face a stronger competition than for example in *Old un's* day of 1921. The general practitioners practising here in 6 or 7 years, whether they be young or experienced, I think, will find it hard to maintain that standard of living which is essential to the performance of their duties and is required of them by their position in society.

Is it not high time that our governing body take up this problem very seriously and arrive at some sort of basis to calculate how many doctors we need in relation to our population so that the numbers of medical students can be controlled?

The problem facing us to-day is whether something definite is going to be done now, or whether we are to allow this vicious circle to persist, which will eventually lower our standard of living and in its wake bring those abuses which are born of financial pressure.

Very young G.P.
Transkei.
21 September 1953.

BANTU SYPHILIS

To the Editor: Dr. Sachs and Dr. Selesnick in their communication of 19 September seriously misconstrue our findings

regarding Neurosyphilis in our study of male Bantu psychiatric admissions during 1952 to Weskoppies Hospital. The facts are:

1. Sixty-one cases (25% of admissions) had a positive blood Wassermann reaction. This is roughly comparable to the incidence in the general population.

2. Fourteen cases had positive findings for General Paralysis of the Insane (i.e. cell and protein increase and paretic colloidal gold curves). Four cases were diagnosed as Interstitial cerebral syphilis. Thus 18 out of 61 (30%) was the incidence of Neurosyphilis in those patients with a positive blood Wassermann reaction.

3. Seven per cent constitutes the incidence of mental disorder directly due to Neurosyphilis as encountered in all our admissions, and *not* the incidence of Neurosyphilis in a very selected population with positive blood Wassermann reactions.

As such we fail to see how the writers can regard it as 'an insignificant rate and not a major problem'.

Weskoppies Hospital,
Pretoria.
22 September 1953.

A. M. Lamont.
W. J. Blignault.

REFERENCE

- Lamont, A. M. and Blignault, W. J. (1953): *S. Afr. Med. J.*, 27, 637.

PATIENT SHOULD BE FREE TO CHOOSE

To the Editor: As an ordinary general practitioner with the major part of my practice in a working-class area, I am very seriously perturbed at what is becoming a malignant growth—slowly but surely strangling the very fundamentals of general practice. I refer to the growing number of Medical Aid Societies and Benefit Societies with closed panels.

Formerly it was the custom for a family to have a practitioner as the family doctor. What is the position now? Take an average family of 5: the father works at the Tramways, so he calls in the Tramway doctor; the daughter works at the clothing factory and calls in the factory doctor; the son is a leather worker—he calls in the leather workers' doctor; the second son works in the building trade and calls in the building trade doctor, and so on *ad nauseam*. In one family therefore, as many as 5 or 6 doctors may well be calling.

It is unfortunately too true that in many instances a practitioner holds several appointments. We know also that in most cases advertisements for vacant posts are just so much eyewash—the appointments having been 'fixed' previously.

The ordinary general practitioner has no counter to this type of opposition. He must stand back and see the practice he has struggled to build up sliding from under his very nose. Pity, too, the graduate who wishes to start a practice.

It is high time that the General Practitioners' Group took energetic and drastic steps to stop the rot and protect the principle upon which the whole of healthy medical practice depends, namely, *the patient must be free to choose his own doctor. Let us have open panels.*

M. M.
Cape Town.
30 September 1953.



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(1280) Eastern Cape dispensing practice with large native population. Gross receipts £3,151. Premium required £1,000 including large stock of drugs, fittings and furniture. Terms possible.

(1399) Transkei. Unopposed prescribing practice. Receipts 1950 51 52 £3,887 18s. 10d., £4,814 2s., £5,064 5s. 6d. Two appointments. Practically no night work. Premium required for goodwill £2,000. Large house for sale at £2,800. Terms possible.

(1434) South Western Cape. Well-established dispensing practice. Receipts £3,755 p.a. £3,500 required for house, practice, drugs, surgery, furniture and some instruments. Bond and terms available. Three appointments.

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(1446) Transkei. Well-established prescribing practice in beautiful and pleasant township with mild climate. Electricity. Waterborne sanitation. Easy reach of sea. Cash receipts: 1951-52—£3,022, £3,600. Premium required £650. House for sale. Bond can be arranged.

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(1458) Transkei. Assistant required for partnership practice with 4 appointments. Commencing salary £80 per month plus board and lodging.

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(P/024) Randse hospitaaldorp. Premie £1,500 en terme kan gereel word. Dit is 'n goedgevestigde praktyk en alleen persone met ondervinding in chirurgie sal in aanmerking geneem word, vandaar die lae premie.

(P/025) Transvaal hospital town. Jewish partner is required. Well-established practice with an average annual income of over £5,000. All surgical facilities. Premium required is £2,000 and easy terms could be arranged.

PRAKTYKE TE KOOP : PRACTICES FOR SALE

(Pr/S82) Excellent non-European practice near Johannesburg. Established in 1944. Average annual net income £2,700 cash. Premium required is £2,000 and terms can be arranged. Premium includes contents of surgery and maternity ward.

(Pr/S78) Oud-gevestigde Vrystaatse praktyk met D.G. aanstelling. Gemiddelde jaarlikse inkomste oorskrei £4,000. Premie van £2,000, sluit medisyne en apparate in. Uitstekende geleentheid vir 'n jong man.

(Pr/S84) Pleasant town in Northern Transvaal, with hospital

facilities. General practice which was run by seller for 10 years besides a large non-transferable mine appointment. The appointment did not allow time for any Native work—only for very few district calls. Net cash income over £1,200 per year though only few hours daily were spent in this practice. Premium £500 on terms. Excellent start for young man.

(Pr/S85) Progressive Transvaal dispensing practice. Excellent surgical facilities. Average gross income £3,500 per annum. Premium required £2,500 and the following terms could be arranged: £1,250 deposit and the balance over a period of 18 months, starting 3 months after cash payment. The premium includes drugs, furniture and fittings, estimated at £800. Two transferable appointments worth £230 per annum. Scope for expansion.

(Pr/S87) Wes-Transvaal. Uitstekende praktyk. Gemiddelde jaarlikse inkomste oorskrei £3,000. Woonhuis en spreekkamers te koop of te huur teen £14 en £11 per maand, onder skeidelik. Premie verlang is £1,500 en terme kan gereel word. Skryf om volle besonderhede.

(Pr/S88) O.V.S. Algemene praktyk met D.G. aanstelling. Geen opposisie. Jaarlikse inkomste ongeveer £3,500. Premie van £1,750 sluit in groot voorraad medisyne, instrumente en meubels. Hierdie is ook 'n ougevestigde praktyk.

(Pr/S90) Transvaal. Uitstekende praktyk in hospitaaldorp. Twee aanstellings. Inkomste oorskry £5,000. Ideale praktyk vir 2 geneshere. Premie verlang is £2,500 en sluit medisyne, voorraad en instrumente in.

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(PD20) Natal South Coast. General mixed prescribing practice. Premium £1,000 plus £200 for full equipment of 2 surgeries. Large proportion of the patients are European visitors, and Indians. A lucrative Native practice could be built up if dispensing was carried out. Immediate introduction.

(PD21) East Griqualand. General mixed practice with net profit of £3,000 annually. Premium £1,900, terms if required. Excellent opportunity for newly qualified practitioner.

(PD22) Natal. Prescribing and dispensing country practice. Total gross receipts for 1951, £3,344 15s. 9d.; 1952, £2,817 10s. 6d.; 1953 (3 months), £846 6s. 10d. Premium £1,500, includes drugs, consulting room furniture and instruments. House for sale £5,500.

(PD23) Natal. Prescribing practice particularly suitable for a woman doctor interested in obstetrics and gynaecology. Total gross receipts for 1950, £1,570; 1951, £1,595; 1952 (6 months), £1,340; 1953 (3 months), £382. Premium £1,250, includes furniture, fittings, instruments, drugs and existing book debts.

(PD24) Natal South Coast. Practice suitable for doctor who does not want full time work. £250 for drugs, dressings, instruments, etc. No charge for goodwill. Small house on ½ morgen, £1,600. Immediate occupation.

PARTNER REQUIRED

(PDX) Durban. General practitioner offers 45% partnership on 18 months' purchase. Applicants should be experienced and be able to put down a certain amount of capital.

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HOSPITAALDEPARTEMENT

GESAMENTLIKE MEDIESE PERSONEEL: VAKATURES

I. Aansoeke word ingewag om die ondergenoemde vakante poste van Mediese Praktisyns by die Gesamentlike Mediese Personeel van die Groot Schuur hospitaal.

2. Die diensvoorskrifte is voorgeskryf en is onderworpe aan die Hospitaalraadsdiens, Ordonnansie Nr. 19 van 1941, soos gewysig, en die regulasies wat ingevolge daarvan opgestel is.

3. Aansoek moet gedoen word (in duplo) op die voorgeskrewe vorm, Staf 23, wat verkrygbaar is by die Direkteur van Hospitaaldienste Posbus 2060, Provinciale Gebou, Waalstraat, Kaapstad, of by die Takverteenwoordigers van die Hospitaaldepartement, Kaapstad (Posbus 1487), Port Elizabeth (Posbus 80), Oos-Londen (Posbus 13), Superintendent van enige Provinciale Hospitaal of by die Sekretaris van enige Skoolraad in die Kaapprovinsie. Die sluitingsdatum vir die ontvangs van aansoekte is 28 November 1953 en voltooide aansoekvorms moet aan die Mediese Superintendent, Groot Schuur Hospitaal, Observatory, Kaap, gepos word.

4. Die gekose applikante sal diens moet aanvaar op 1 Februarie 1954.
 5. Op aanbeveling van die Uitvoerende Adviserende Komitee kan die Mediese Superintendent sy diskresie gebruik en persone wat

Aangestel word as Mediese Praktisys, Graad "A" of "B" vir die verskillende departemente van die hospitaal beskikbaar stel.

Die volgende gedig moet vir 'n laer gesê word. Vir die gesêing moet word vir 'n laer graad.

	DEPARTEMENT											POS	
MEDIES	Mediese Praktisyne, Graad	"C"	(3 poste)
"	"	"	"	"	"	"	"	"	"	"	"	"B"	(2 poste)
"	"	"	"	"	"	"	"	"	"	"	"	"A"	(4 poste)
PEDIATRIE	"	"	"	"	"	"	"	"	"	"	"	"C"	(1 pos)
DERMATOLOGIE	"	"	"	"	"	"	"	"	"	"	"	"C"	(1 pos)
NEURO-PSIGIATRIE	"	"	"	"	"	"	"	"	"	"	"	"C"	(1 pos)
ALGEMENE CHIRURGIE	"	"	"	"	"	"	"	"	"	"	"	"C"	(2 poste)
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OOR, NEUS EN KEEF	"	"	"	"	"	"	"	"	"	"	"	"A"	(3 poste)
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OFTALMOLOGIE	"	"	"	"	"	"	"	"	"	"	"	"B"	(1 pos)
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ORTOPÉDIE	"	"	"	"	"	"	"	"	"	"	"	"B"	(1 pos)
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UROLOGIE	"	"	"	"	"	"	"	"	"	"	"	"B"	(1 pos)
NEURO-CHIRURGIE	"	"	"	"	"	"	"	"	"	"	"	"C"	(1 pos)
VERLOSKUNDE EN VROUWKWALE	"	"	"	"	"	"	"	"	"	"	"	"C"	(1 pos)
"	"	"	"	"	"	"	"	"	"	"	"	"B"	(2 poste)
"	"	"	"	"	"	"	"	"	"	"	"	"A"	(2 poste)
PATOLOGIE	"	"	"	"	"	"	"	"	"	"	"	"C"	(2 poste)
"	"	"	"	"	"	"	"	"	"	"	"	"B"	(2 poste)
RADIÖ-DIAGNOSE	"	"	"	"	"	"	"	"	"	"	"	"A"	(3 poste)
RADIO-TERAPIE	"	"	"	"	"	"	"	"	"	"	"	"C"	(1 pos)
NARKOSE	"	"	"	"	"	"	"	"	"	"	"	"A"	(1 pos)
"	"	"	"	"	"	"	"	"	"	"	"	"C"	(1 pos)
FISIESE MEDISYNE	"	"	"	"	"	"	"	"	"	"	"	"B"	(3 poste)
BORSCHIRURGIE	"	"	"	"	"	"	"	"	"	"	"	"A"	(2 poste)
ONGEVALLE AFDELING	"	"	"	"	"	"	"	"	"	"	"	"C"	(1 pos)
"	"	"	"	"	"	"	"	"	"	"	"	"C"	(1 pos)
"	"	"	"	"	"	"	"	"	"	"	"	"B"	(1 pos)
"	"	"	"	"	"	"	"	"	"	"	"	"A"	(1 pos)

Die volgende is die salarisse aan bogenoemde poste verbonde:—

Graad "C": £1,000 × £50 = £1,200 per jaar

Graad "C" £1,000 x £50 = £1,200 per jaar

Graad "A" £500—£600 660—£720 per jaar

Behalwe bogenoemde salarisse word daar nog 'n duurtetoeslag van £320 per jaar aan getroude en £100 per jaar aan ongetroude amptenare betaal.

VEREISTE KWALITEIKASIES

Graad "C" Nie minder as vyf jaar ondervinding na ontvangs van Graad of vier jaar ondervinding na registrasie waarvan nie minder as drie jaar opleiding voltooi is as Spesialis in die besondere afdelings waarin die vakante pos val nie.

Graad "B" Nie minder as drie jaar ondervinding na ontvangst van Graad of twee jaar ondervinding na registrasie nie.

Tot en met inbegrip van drie jaar ondervinding na ontvangoen van Graad of twee jaar ondervinding na registrasie.

Graadt A4 Toen niet meegrip van drie jaar onderinding na ontvangst van Graadt B4 twee jaar onderinding na registratie (12078)

(12078)

Provincial Administration of the Cape of Good Hope

HOSPITALS DEPARTMENT

JOINT MEDICAL STAFF: VACANCIES

1. Applications are invited for the under-mentioned vacant posts of Medical Practitioner on the Joint Medical Staff of the Groote Schuur Hospital.

2. The conditions of service are prescribed in terms of the Hospital Board Ordinance, No. 19 of 1941, as amended, and the regulations framed thereunder.

3. Applications should be submitted (in duplicate) on the prescribed form, Staff 23, which is obtainable from the Director of Hospital Services, P.O. Box 2060, Provincial Building, Wale Street, Cape Town, or from the Branch Representative of the Hospital Department, Cape Town (P.O. Box 1487), Port Elizabeth (P.O. Box 80), East London (P.O. Box 13), Kimberley (P.O. Box 618), and Umtata (P.O. Box 202), or from the Medical Superintendent of any Provincial Hospital or Secretary of any School Board in the Cape Province. The closing date for the receipt of applications is 28 November 1953, and applications should be addressed to the Medical Superintendent, Groote Schuur Hospital, Observatory, Cape.

4. The successful applicants will be required to assume duty on 1 February 1954.

5. Persons employed as Medical Practitioners Grade (A) or (B) shall be available for circulation among the different Departments at the discretion of the Medical Superintendent, acting on the recommendation of the Medical Executive and Advisory Committee.

Applicants are required to state, in the event of their application for a specific grade not being successful, whether they wish to be considered for a lower grade.

DEPARTMENT	POST
MEDICINE	Medical Practitioner Grade "C" (3 posts)
"	" " (2 posts)
PAEDIATRICS	" " (4 posts)
DERMATOLOGY	" " (1 post)
NEURO-PSYCHIATRY	" " (1 post)
GENERAL SURGERY	" " (1 post)
"	" " (2 posts)
EAR, NOSE AND THROAT	" " (2 posts)
"	" " (3 posts)
OPHTHALMOLOGY	" " (1 post)
ORTHOPAEDICS	" " (1 post)
UROLOGY	" " (1 post)
NEURO-SURGERY	" " (1 post)
OBSTETRICS AND GYNAECOLOGY	" " (1 post)
"	" " (2 posts)
PATHOLOGY	" " (2 posts)
"	" " (2 posts)
RADIO-DIAGNOSIS	" " (1 post)
RADIO-THERAPY	" " (1 post)
ANAESTHETICS	" " (1 post)
"	" " (3 posts)
PHYSICAL MEDICINE	" " (1 post)
THORACIC SURGERY	" " (1 post)
CASUALTY DEPARTMENT	" " (1 post)
"	" " (1 post)
"	" " (1 post)

The following are the emoluments of the above-mentioned posts:—

Grade "C" £1,000 - £50 - £1,200 per annum

Grade "B" £720 - £40 - £960 per annum

Grade "A" £500 - £600 - £660 - £720 per annum

In addition a cost-of-living allowance is payable at present at the rate of £320 per annum to married officials and £100 per annum to single officials.

QUALIFICATIONS REQUIRED

Grade "C" Not less than five years' experience after graduation or four years' experience after registration, of which not less than three years shall have been spent in training as a Specialist in the specialities included in the division in which the vacancy occurs.

Grade "B" Not less than three years' experience after graduation or two years' experience after registration.

Grade "A" Up to and including three years' experience after graduation or two years' experience after registration.

(12078)

Natal Provincial Administration

VACANCIES: SENIOR MEDICAL OFFICERS

Applications are invited from registered medical practitioners for appointment to the following vacancies:—

Addington Hospital

- (a) Department of Anaesthetics
- (b) Department of Ophthalmology
- (c) Department of Surgery
- (d) Department of Gynaecology and Obstetrics
- (e) Department of Medicine
- (f) Department of Orthopaedics
- (g) Coloured Casualty and Out-patient Department
- (h) European Casualty Department
- (i) Ear, Nose and Throat Department
- (j) General duties

King Edward VIII Hospital

- (a) Department of Medicine
- (b) Department of Pediatrics
- (c) General duties
- (d) Ear, Nose and Throat Department

Grey's Hospital

- (a) Out-patient Department
- (b) Department of Anaesthetics
- (c) General duties

Edendale Hospital

- (a) Department of Gynaecology and Obstetrics
- (b) Department of Surgery
- (c) Department of Orthopaedics
- (d) Department of Medicine
- (e) Department of Ophthalmology
- (f) Department of Anaesthetics
- (g) Ear, Nose and Throat Department
- (h) Out-patient Department.

Country Hospitals

General duties at the following hospitals:—

Vryheid Hospital, Ladysmith Hospital, Newcastle Hospital, G. J. Crookes Renishaw Hospital, Scottburgh; Port Shepstone Hospital, Eshowe Hospital, Lower Umfolosi District Hospital, Empangeni.

Appointment is on 12 months contract, and the salary attached to the posts is as follows:—

Two years service after qualification: £500 per annum plus free quarters or an allowance in lieu thereof.

Three years service after qualification: £600 per annum plus free quarters or an allowance in lieu thereof.

Four years service after qualification: £700 per annum plus free quarters or an allowance in lieu thereof.

Five or more years service after qualification: £800 per annum plus free quarters or an allowance in lieu thereof.

The revision of the salary scales is at present being considered. In addition to the foregoing salary, a temporary cost-of-living allowance is payable at prescribed Public Service Rates.

Applications, giving full details of experience and qualifications, should reach the Director, Provincial Medical and Health Services, P.O. Box 20, Pietermaritzburg, by 21 October 1953. (AD7811)

Wanted : Medical Officer

Applications are invited from registered medical practitioners for the post of Medical Officer to the Mallin Sick Benefit Society. This appointment has the approval of the Medical Association. Apply to: Hon. Secretary, P.O. Box 43, Zwart-ruggens.

Double Practice for Sale

Outstanding opportunity for energetic doctor. Unopposed European and non-European cash practices in large expanding areas. Situated in Retreat and Cape Flats. Apply 'A. S. K.', P.O. Box 643, Cape Town.

Natale Proviniale Administrasie

VAKATURES: SENIOR MEDIESE BEAMPTES

Aansoeke om aanstelling in ondervermelde poste word van geregistreerde mediese praktisyne ingewag:—

Addington Hospitaal

- (a) Narkose Afdeling
- (b) Ophalmiese Afdeling
- (c) Snykunde Afdeling
- (d) Verloskunde en Ginekologie Afdeling
- (e) Medisyne Afdeling
- (f) Ortopediese Afdeling
- (g) Nie-blanke Ongevalle en Buite-pasiénte Afdeling
- (h) Blanke Ongevalle Afdeling
- (i) Oor, Neus en Keel Afdeling
- (j) Algemene pligte

Koning Edward VIII Hospitaal

- (a) Medisyne Afdeling
- (b) Kindersiekte Afdeling
- (c) Algemene pligte
- (d) Oor, Neus en Keel Afdeling

Grey's Hospitaal

- (a) Buite-pasiénte Afdeling
- (b) Narkose Afdeling
- (c) Algemene pligte

Edendale Hospitaal

- (a) Verloskunde en Ginekologie Afdeling
- (b) Snykunde Afdeling
- (c) Ortopediese Afdeling
- (d) Medisyne Afdeling
- (e) Ophalmiese Afdeling
- (f) Narkose Afdeling
- (g) Oor, Neus en Keel Afdeling
- (h) Buite-pasiénte Afdeling

Buitedistrikse Hospitale

Algemene pligte aan die volgende Hospitale:—

Hospitale te Vryheid, Ladysmith, Newcastle, Port Shepstone en Eshowe; G. J. Crookes Renishaw Hospitaal te Scottburgh; Onder Umfolosi en Distrik Oorlogs-gedenk Hospitaal te Empangeni.

Aanstelling is op 12 maande kontrak, en die salarisskaal verbondne aan die poste is as volg:—

Twee jaar diens na afstudering: £500 p.j. plus vry kwartiere of 'n toelae in plaas daarvan.

Drie jaar diens na afstudering: £600 p.j. plus vry kwartiere of 'n toelae in plaas daarvan.

Vier jaar diens na afstudering: £700 p.j. plus vry kwartiere of 'n toelae in plaas daarvan.

Vyf of meer jaar diens na afstudering: £800 p.j. plus vry kwartiere of 'n toelae in plaas daarvan.

Die hersiening van die salarisskale is tans onder oorweging.

'n Tydelike duurtoeslag teen heersende Staatsdienstariewe is ook betaalbaar.

Aansoeke met volledige besonderhede betreffende ervaring en kwalifikasies moet aan die Directeur van Provinciale Mediese en Gesondheidsdienste, Posbus 20, Pietermaritzburg, gerig word, sodat hulle hom voor of op 21 Oktober 1953 bereik.

(AD7811)

Vennootskap Verlang

Algemene praktisyn met ses jaar ondervinding in die Karoo, soek vennootskap in enige Bolandse dorp. Besit eie praktyk, en is bereid om te ruil vir 'n vennootskap in die Boland. Skryf aan 'A. S. N.', Posbus 643, Kaapstad.

Rooms To Let

General practitioner prepared to share rooms and services of receptionist with specialist in Harvard Centre, Pinelands. Available from January 1954. Reply 'A. S. O.', P.O. Box 643, Cape Town.

Vakature vir Besoekende Mediese Beamples (DEELTYDS)

WESTLAKE-HOSPITAAL, RETREAT

Aansoeke om aanstelling in die ondergenoemde betrekings in die personeel van die Westlake-hospitaal, Retreat, word van behoorlike gekwalfiseerde kandidate ingewag:

<i>Pos</i>	
(a) Bors-chirurg	
(b) Algemene Chirurg	
	<i>Besoldiging aan pos verbonde</i>
(a) £1,500 per jaar	
(b) £500 per jaar	

Pligte

Vier operasie- en vier consultasiesessies per week. Een operasie- en een consultasiesessie per week.

Kandidate moet Suid-Afrikaanse burgers of burgers van 'n Statebondsland of die Republiek Ierland en tweetalig wees en moet minstens drie jaar in die Unie van Suid-Afrika of Suidwes-Afrika gewoon het.

Registrasie by die Suid-Afrikaanse Mediese en Tandheelkundige Raad as 'n spesialis in die besondere spesialiteit is 'n noodsaklike vereiste vir aanstelling in enigeen van die poste.

Van die aangestelde persone sal verweg word om pasiente in die Westlake-hospitaal, die Brooklyn-borshospitaal, die Dr. Stals-hospitaal en die Stedelike Hospitaal vir aansteeklike siektes te behandel asook om saam te werk in alle navorsing wat met hulle spesialiteite in verband staan en om, waar moontlik, personeelsamesprekings by te woon.

Nadere besonderhede in verband met hierdie voorgenome aanstellings is van die Mediese Superintendent van die Westlake-hospitaal, Pk. Retreat, verkrybaar.

Daar moet aansoek gedoen word op die voorgeskrewe vorms (Z83 en S.D.K. 8a) wat van die Sekretaris van Gesondheid, Postbus 386, Pretoria, verkrybaar is.

Die sluitingsdatum vir die ontvangs van aansoeke is 17 Oktober 1953. (42426)

Basutoland Government

VACANCY FOR MEDICAL OFFICER

Applications are invited from registered medical practitioners for the above pensionable post, on a salary scale of £865; £865 : £935 × 35—£1,005 × 45—£1,140 × 45—£1,320. Entry point on this scale is determined by war service and/or previous experience. Cost-of-living allowance is payable; the present rates are:

Married Officers: On the first £800 of salary—12½%, on the remaining salary—7½% with a maximum of £132 per annum.

Single Officers: One half of the above rates, subject to a maximum of £66 per annum.

Rental deduction of 10% of salary for furnished quarters.

Annual vacation (accumulative) leave of 6 weeks and 2 weeks occasional (non-accumulative) leave are granted, subject to the exigencies of the Service. Biennial warrant to the coast. Overseas leave passage allowance for officer, wife and proportionate allowance for children every tour of 3 years.

Private practice is at present allowed but it is subordinate to official duties.

A knowledge of practical surgery will be an advantage.

The climate is healthy and the Territory free from tropical diseases.

Applications should be forwarded to the Director of Medical Services, Maseru (from whom further particulars may be obtained) by 31 October 1953.

(2470)

Parys Munisipaliteit

VAKATURE : DEELTYDSE GENEESKUNDIGE GESONDHEIDSBEAMPTE

Aansoeke van behoorlike gekwalfiseerde persone word ingewag vir die betrekking van deeltydse Geneeskundige Gesondheidsbeampte teen 'n besoldiging van £12 10s. per maand ten opsigte van algemene dienste en £12 10s. per maand ten opsigte van dienste by die Naturelle Veneriele Kliniek in die Parys Lokasie. Die suksesvolle applikant sal 'n diensoorseenkoms met die Stadsraad moet aangaan. Die aanstelling is onderhewig aan wedersydse diensopsegging van drie maande asook aan die goedkeuring van die Minister van Gesondheid.

Aansoeke, waarin volledige besonderhede in verband met vorige ondervinding van die pligte verbonde aan die betrekking, gesondheidstoestand, beroepsqualifikasies en ouderdom gegee word, moet die ondergetekende bereik nie later as 12-uur middag op Dinsdag, 20 Oktober 1953, nie.

W. P. Schonken
Stadsklerk

Stadskantore
Parys
25 September 1953
(Kennisgewing nr. 45/1953)

Parys Municipality

VACANCY : PART-TIME MEDICAL OFFICER OF HEALTH

Applications are invited from suitably qualified persons for the position of part-time Medical Officer of Health at a monthly remuneration of £12 10s. in respect of general services and £12 10s. in respect of services to be rendered at the Native venereal clinic in the Parys Location. The successful applicant will be required to enter into a contract of service with the Town Council. The appointment is subject to the approval of the Minister of Health and to three months' notice of termination of service on either side.

Applications, giving full particulars of professional qualifications, previous experience in the execution of the duties attaching to the post, physical fitness and age, must reach the undersigned not later than noon on Tuesday, 20 October 1953.

W. P. Schonken
Town Clerk

Town Offices
Parys
25 September 1953
(Notice No. 45/1953)

Departement van Mynwese

PLAASVERVANGER VIR MEDIESE BEAMPTE BY DIE ALLUVIALE STAATSDELWERYE, ALEXANDERBAAI

Die dienste van 'n tweetalige algemene mediese praktisy (verkieslik ongetroud) is nodig by die Alluviale Staatsdelwerye, Alexanderbaai, gedurende die tydperk 14 Desember 1953 tot 13 Februarie 1954.

Die besoldiging bedra £80 per maand (alles insluitend) plus vry losies en inwoning in die kwartiere vir ongetroudes.

'n Vry retrokaartjie vir lugvervoer tussen Kaapstad en Alexanderbaai sal verskaf word en motorvervoer is beskikbaar vir gebruik aan diens.

Die plaaslike hospitaal (32 beddens) is goed toegerus. Daar bestaan ontspanningsgeriewe.

Aansoeke moet aan die Algemene Bestuurder, Alluviale Staatsdelwerye, Alexanderbaai, Namakwaland, gerig word en moet daardie kantoor voor of op 15 November 1953 bereik.

M.M.Staf 1/28/7
(42518)

Assistant Required

Assistant with a view to partnership required as soon as possible for a partnership practice in the Peninsula. Write 'A. S. T.', P.O. Box 643, Cape Town.

Provincial Administration of the Cape of Good Hope HOSPITALS DEPARTMENT

HOSPITAL BOARD SERVICE: VACANCY

1. Applications are invited from registered medical practitioners for appointment to the post of medical practitioner, Grade B, at the Cape Town Free Dispensary, with salary on the scale £720 - £40 - £960 per annum.

2. The conditions of service are prescribed in terms of the Hospital Board Service Ordinance No. 19 of 1941, as amended, and the regulations framed thereunder.

3. In addition to the salary scale indicated a temporary cost-of-living allowance, at rates prescribed from time to time by the Administrator, is payable. The present rate is £100 per annum for single persons and married women whose husbands are not in Government employment, and £320 per annum for married men.

4. Applicants should indicate if appointment to a Grade A, post (salary scale £500 - £600 - £660 - £720 per annum) would be accepted as an alternative in the event of the application for the B post being unsuccessful.

5. The appointment will be on contract for two years in the first instance and may be renewed for twelve months at a time up to a maximum of four years. The appointment may, however, be terminated by three months' notice, in writing, on either side.

6. Application should be submitted, in duplicate, on the prescribed form (Staff 23), which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or the Medical Superintendent of any Provincial Hospital, or Secretary of any School Board in the Cape Province.

7. The completed application forms should be addressed to the Medical Superintendent, Cape Town Free Dispensary, Buitenkant Street, Cape Town. The closing date for receipt of applications is 21 October 1953. (A562756)

Provinsiale Administrasie van die Kaap die Goeie Hoop

HOSPITAALDEPARTEMENT

HOSPITAALRAADSDIENS: VAKATURE

1. Aansoeke word ingewag van geregistreerde geneesherre vir aanstelling tot die pos van Geneesheer, Graad B, by die Kaapstadse Vrye Aptek, met salaris volgens die skaal £720 - £40 - £960 per jaar.

2. Die diensvooraardes word voorgeskryf ingevolge die Ordonnansie op Hospitaalraadsdiens nr. 19 van 1941, soos gewysig, en die regulasies wat daarkragtens opgestel is.

3. Benewens die salarisskaal soos aangedui is 'n tydelike lewenskosteloaag volgens tariewe wat van tyd tot tyd deur die Administrator vastgestel word betaalbaar. Die teenwoordige tarief is £100 per jaar vir ongetroude persone en getroude vrouens wie se eggenote nie in die Regeringsdiens is nie en £320 per jaar vir getroude mans.

4. Kandidate moet aandui, indien applikasies vir die Graad B pos nie suksesvol is nie, of hulle bereid sal wees om aanstelling tot 'n Graad A pos (salarisskaal £500 - £600 - £660 - £720 per jaar) te accepteer.

5. Die aanstelling sal in die eerste instansie op twee jaar kontrak wees en kan daarna vir tydperke van twaalf maande herhaal word tot 'n maksimum van 4 jaar. Die aanstelling is onderhewig aan wedersydse kennisgewing van 3 maande aan beide kante.

6. Aansoek moet gedoen word, in duplo, op die voorgeskrewe vorm (Staf 23) wat verkrybaar is by die Direkteur van Hospitaaldienste, Posbus 2060, Kaapstad, of by die Mediese Superintendent van enige Provinciale Hospitaal, of by die Sekretaris van enige Skoolraad in die Kaapprovinsie.

7. Die ingevalle aansoek vorms moet aan die Mediese Superintendent, Kaapstadse Vrye Aptek, Buitenkantstraat, Kaapstad, gerig word. Die sluitingsdatum vir die ontvangs van aansoeke is 21 Oktober 1953. (A562756)

Natal Provincial Administration

VACANCIES: ASSISTANT RADIOLOGISTS: ADDINGTON AND KING EDWARD VIII HOSPITALS, DURBAN

Applications are invited from registered medical practitioners for appointment to the above vacant posts.

Applicants for the posts are required to have at least two years' experience in approved hospitals, and must undertake to serve the Administration for three years as Radiologists after receiving the Diploma in Medical Radiology.

The salary attaching to the posts prior to qualification for the Diploma is as follows:

Two years service after qualification: £500 p.a. plus free quarters or an allowance in lieu thereof.

Three years service after qualification: £600 p.a. plus free quarters or an allowance in lieu thereof.

Four years service after qualification: £700 p.a. plus free quarters or an allowance in lieu thereof.

Five or more years service after qualification: £800 p.a. plus free quarters or an allowance in lieu thereof.

After qualification for the Diploma in Medical Radiology, salary will be paid at the rate of £1,200 per annum for the first year, £1,500 per annum for the second year, and £1,750 per annum for the third year.

Applications should reach the Director of Provincial Medical and Health Services, P.O. Box 20, Pietermaritzburg, by 21 October 1953.

(AD7810)

Munisipaliteit Warmbad

VAKATURE: DEELTYDSE MEDIESE GESONDHEIDSBEAMPTE

Applikasies word hiermee gevra van bevoegde persone om die betrekking van 'n deeltydse Mediese Gesondheidsbeampte te vul. Die pligte van die beampte is die soos uiteengesit in vorm 197 (Gesondheid) met sekere wysigings, besonderhede waarvan verkrygbaar is by ondergetekende, op aanvraag.

Die salaris verbonde aan die betrekking is £60 per jaar, betaalbaar maandeliks.

Applikasies gemerk „Mediese Gesondheidsbeampte“ wat volle besonderhede van die applikant bevat, n.l. beroepskwalifikasies, ouderdom, huwelikstaat, ens. moet ondergetekende bereik nie later as 3-uur nm. op Dinsdag, 27 Oktober 1953,

J. S. van der Walt
Stadsklerk

Munisipale Kantore
Warmbad
Transvaal
Kennisgewing nr. 16/53

Warmbaths Municipality

VACANCY: PART-TIME MEDICAL OFFICER OF HEALTH

Applications are hereby invited of competent persons to fill the post of part-time Medical Officer of Health.

The duties will be as specified in form 197 (Health) with certain amendments, particulars of which can be obtained from the undersigned.

The salary applicable to the post is £60 per annum, payable monthly.

Applications marked "Medical Officer of Health", stating full particulars of professional qualifications, age, marital state, etc. must reach the undersigned not later than 3 p.m. on 27 October 1953.

J. S. van der Walt
Town Clerk

Municipal Offices
Warmbaths
Transvaal
Notice No. 16/53

Transvaalse Provinciale Administrasie

VAKATURES BY PUBLIEKE HOSPITAAL

Aansoeke word ingewag van kandidate met geskikte kwalifikasies vir die onderstaande poste by Publieke Hospitaal in die Transvaal.

Aansoeke moet gerig word aan die Geneeskundige Superintendent of Verantwoordelike Geneesheer van die betrokke hospitaal en moet volle besonderhede bevat aangaande die ouderdom, professionele, akademiese en taalkwalifikasies, ondervinding en huwelikstaat van die applikant en moet voorts 'n aanduiding bevat van die vroegste datum waarop diens aanvaar kan word.

Lewenskostetoeleae tans betaalbaar aan voltydse werkneemers:

	Lewenskostetoeleae	
Salaris	Getroud	Ongetroud
Oor £350	£320 p.j.	£100 p.j.

Van persone wat aangestel word, sal verwag word om bevredigende sertifikate in te dien, asook om hulle te onderwerp aan 'n geneeskundige ondersoek by die betrokke hospitaal.

Aansoekvorms is verkrybaar van enige Transvaalse Publieke Hospitaal of die Provinciale Sekretaris, Afdeling Hospitaaldienste, Posbus 2060, Pretoria.

Benewens jaarlikse salaris en lewenskostetoeleae ontvang voltydse werkneemers spoorwegkonseissie en word verlof toegestaan ooreenkomsdig die hospitaal verlofregulاسies.

Die sluitingsdatum van aansoeke vir die poste is 19 Oktober 1953.

Hospitaal	Vakture	Salarisskaal	Opmerkings
Johannesburg	Mediese Registraleur (1)	£620, 780 820, 860	Geregistreerde mediese praktisyen. Moet vir ten minste twee jaar gekwalifiseerd wees.
Pretoria	Kliniese Assistent (Departement van Patologie) (1)	£620, 780 820, 860	Geregistreerde mediese praktisyen.
Tara	Ongevallebeampete (1)	£620, 780 820, 860	Geregistreerde mediese praktisyen.

(42607)

Munisipaliteit van Frankfort

DEELTYDSE GENEESKUNDIGE GESONDHEIDSBEAMpte

Aansoeke word ingewag vir die betrekking van deeltydse Geneeskundige Gesondheidsbeampte teen 'n allesinsluitende besoldiging van £120 per jaar.

Applikante moet volledige besonderhede van kwalifikasies meld. Dienste moet so spoedig moontlik aanvaar word.

Afskrifte van 'Die Memorandum van Ooreenkoms' betreffende die voorwaarde van aanstelling kan van ondergetekende verkry word. Aansoeke in verselle koerante gemerk 'Gesondheidsbeampte' moet die ondergetekende nie later dan Maandag, 26 Oktober 1953, bereik nie.

Stemverwing by Raadslede sal 'n diskwalifikasie wees.

W. H. Harmsen
Stadsklerk

Posbus 2
Frankfort

Room To Let

Bright airy room to let. Modern building in Main Road, Claremont. Ideally suited for dentist. Apply 122 Main Road, Claremont.



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South African Blood Transfusion Service

Applications are invited from suitably qualified persons for the undermentioned posts in the Central Laboratory of the Service in Johannesburg.

Applications, stating full details of age, qualifications, experience, marital status, etc., should be submitted in writing to the Medical Director, S.A. Blood Transfusion Service, P.O. Box 9326, Johannesburg.

Successful applicants will be required to join the Service's Staff Provident Fund.

(i) *Serologist*. £1,200 \times 50—£1,500 per annum plus cost-of-living allowance at present £14 14s. 8d. per month. Applicants should specify their previous experience in bacteriology and serology as this may have a bearing on the commencing salary.

(ii) *Medical Officer*. £1,000 \times 36—£1,200 per annum plus cost-of-living allowance at present £14 14s. 8d. per month.

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Port Nolloth

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Assistant Wanted

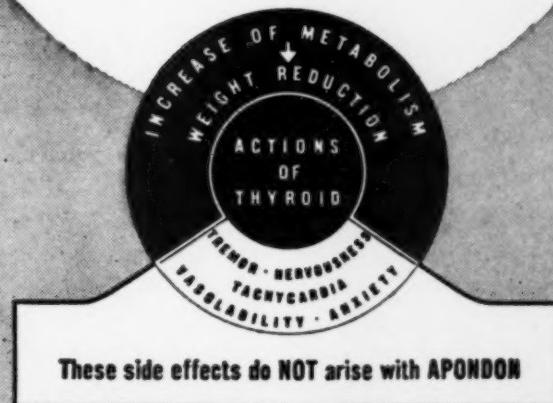
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